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BODY CONTROL MODULE (SECTION C)

BODY CONTROL MODULE (BCM)

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Overview

BODY CONTROL SYSTEM DESCRIPTION AND OPERATION

The body control system consists of the body control module (BCM), communications, and various input and outputs. Some inputs, outputs and messages require other modules to interact with the BCM. The BCM also has discrete input and output terminals to control the vehicle's body functions. The BCM is wired to the GMLAN high speed serial data buss and the GMLAN low speed serial data buss and acts as a gateway between them. If the BCM does not communicate the vehicle will not start due to the inability of the engine control module (ECM)/ powertrain control module (PCM) and theft deterrent module (TDM) to communicate without the BCM providing the gateway function.

POWER MODE DESCRIPTION AND OPERATION

Serial Data Power Mode Master

Power to many of this vehicles circuits is controlled by the module that is designated the power mode master (PMM). This vehicles PMM is the body control module (BCM). The ignition switch is a low current switch with multiple discrete ignition switch signals to the PMM for determination of the power mode that will be sent over the serial data circuits to the other modules that need this information. The PMM will also activate relays and other direct outputs of the PMM as needed. The PMM determines which power mode (Off, Accessory, Run, Crank Request) is required, and reports this information to other modules via serial data. Modules which have switched voltage inputs may operate in a default mode if the PMM serial data message does not match what the individual module can see from its own connections.

The PMM receives ignition switch signals to identify the operators desired power mode. The PMM Power Mode Parameters table below illustrates the correct state of these input parameters (circuits) in correspondence to the ignition switch position:

PMM Power Mode Parameters

Ignition Switch Position	Power Mode Transmitted	Ign. Off / Run / Crank (Run Crank Ignition 1 Voltage Circuit)	Ignition Accessory / Run (Accessory Voltage Circuit)	Ignition Run/Crank (Ignition 1 Voltage Circuit)
Off Key Out	Off	Key Out/ACC	Inactive	Inactive
Off Key IN	Off	Key In/Off	Inactive	Inactive
Accessory	Accessory	Key Out/ACC	Active	Inactive
Run	Run	Run	Active	Active
Start	Crank Request	Crank	Inactive	Active

(continued on next page)

Overview (cont'd)

Relay Controlled Power Mode

The body control module (BCM) uses the discrete ignition switch inputs Run/Crank Ignition 1 Voltage, Accessory Voltage, and Ignition 1 Voltage, to distinguish the correct power mode. The BCM, after determining the desired power mode, will activate the appropriate relays for that power mode.

The RAP relay remains on for a timed period after the Ignition key is removed. Refer to Retained Accessory Power Description and Operation for more information on the retained accessory power (RAP) function.

BCM Awake/Sleep States

The body control module (BCM) is able to control or perform all of the BCM functions in the awake state. The BCM enters the sleep state when active control or normal monitoring of system functions has stopped and a time limit has passed. The BCM must detect certain wake-up inputs before entering the awake state. The BCM monitors for these inputs during the sleep state.

The BCM will enter the awake state if any of the following wake-up inputs are detected:

- Activity on the serial data line
- Detection of a battery reconnect
- Any door open signal
- Headlamps ON
- Key-in-ignition
- Ignition ON
- Park lamps ON
- Keyless entry or remote start message

The BCM will enter a sleep state when all of the following conditions exist:

- The ignition switch is OFF, key out.
- No activity exists on the serial data line.
- No outputs are commanded.
- No delay timers are actively counting.
- No wake-up inputs are present.

If all these conditions are met, the BCM will enter a low power or sleep condition.

(continued on next page)

Overview (cont'd)

RETAINED ACCESSORY POWER DESCRIPTION AND OPERATION

Retained Accessory Power (RAP)

The retained accessory power (RAP) system allows specific vehicle functions to operate for a specific amount of time after the ignition switch is turned OFF. The BCM monitors the ignition switch position, battery condition, and each door open/closed status to determine whether RAP should be initiated or terminated. RAP is controlled with 2 different methods; serial data and relay control. The relay is internal to the BCM and feeds multiple external components. Some modules receive a RAP message over the serial data circuits. Serial data controlled RAP is deactivated as required by their modules RAP power mode operation. Other subsystems are activated directly by the BCM through the internal RAP relay. Components and systems that are active in RAP are also activated anytime the ignition is any position other than OFF regardless of the door switch signals.

The BCM sends a serial data power mode message ending the RAP function when one of the following conditions are met:

- The BCM receives an input indicating the opening of any passenger compartment door after the ignition key is out of the ignition.

  Important: The only door that will turn off the radio during RAP is the driver door. This is a function of the radio and will still turn off after the time limit.
- The BCM internal timer for RAP expires after approximately 10 minutes.

The BCM detects a decrease in battery voltage below a calibrated limit.

Relay Control of Retained Accessory Power (RAP)

The body control module (BCM) keeps the internal RAP relay energized during all power modes, except Off-Awake and Crank. The relay is also energized for approximately 10 minutes after shutting the ignition OFF and removing the key, providing no door is opened. The BCM will de-energize the internal RAP relay at the same time the serial data message is sent to end RAP. When the internal RAP relay is energized voltage is applied on the accessory voltage circuit at BCM harness connector X2 terminal 22.

The devices powered by the internal RAP relay during the RAP power mode are as follows:

- Sunroof module - (CF5)
- Mobile radio fuse block, relay A - (9L4)
- Sliding rear window switch - (A48)
- Window switches, driver and passenger - (A31 w/o AN3)

(continued on next page)

Overview (cont'd)

Serial Data Control of Retained Accessory Power (RAP)

RAP systems controlled by serial data are as follows:

Power Windows

If equipped with RPO AN3 the front window switches are separate modules that operate the windows on their respective side of the vehicle and receive the serial data RAP messages. Window RAP activation/termination timing is the same as relay operation.

Vehicle Communication Interface Module (VCIM) (Onstar®)

VCIM RAP activation/termination is the same as radio operation with 1 exception; if there is an active call when the ignition key is turned off the VCIM will remain in RAP mode and keep the radio in RAP mode until the call is terminated.

Radio

Radio RAP activation/termination is the same as relay operation with 1 exception; the only door switch that will turn off the radio during RAP is the driver door open switch.

Backup Alarm/Camera - Backup Alarm Relay Schematic

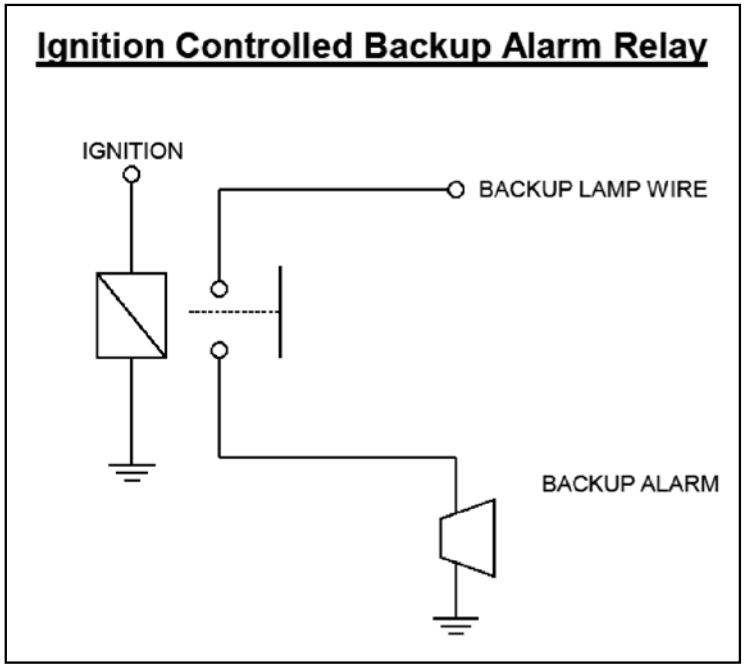
For installation of backup alarm/camera on vehicles without option code 8S3 [Factory backup alarm], connection can be made at the rear lighting connector X1 or X2.

The backup lamps come on with perimeter lighting and key fob acknowledgement, to avoid operation upon entry and exit from the vehicle there are two options...

1. Have the dealer load the SFW [backup alarm calibration] software in your body computer. This calibration disables the perimeter lighting feature and will eliminate the activation of the back-up alarm when exiting and/or key fob activation. Note there is a fee for the dealers to perform this service. The back-up alarm can then be wired directly to the back-up lamp circuit directly and will operate (alarm sounded) when the vehicle is in reverse and the back-up lamps are illuminated.

OR

2. Add an ignition controlled relay to connect the backup alarm/camera to the backup lamp circuit so that it will only operate when the ignition is on and the backup lamps are on



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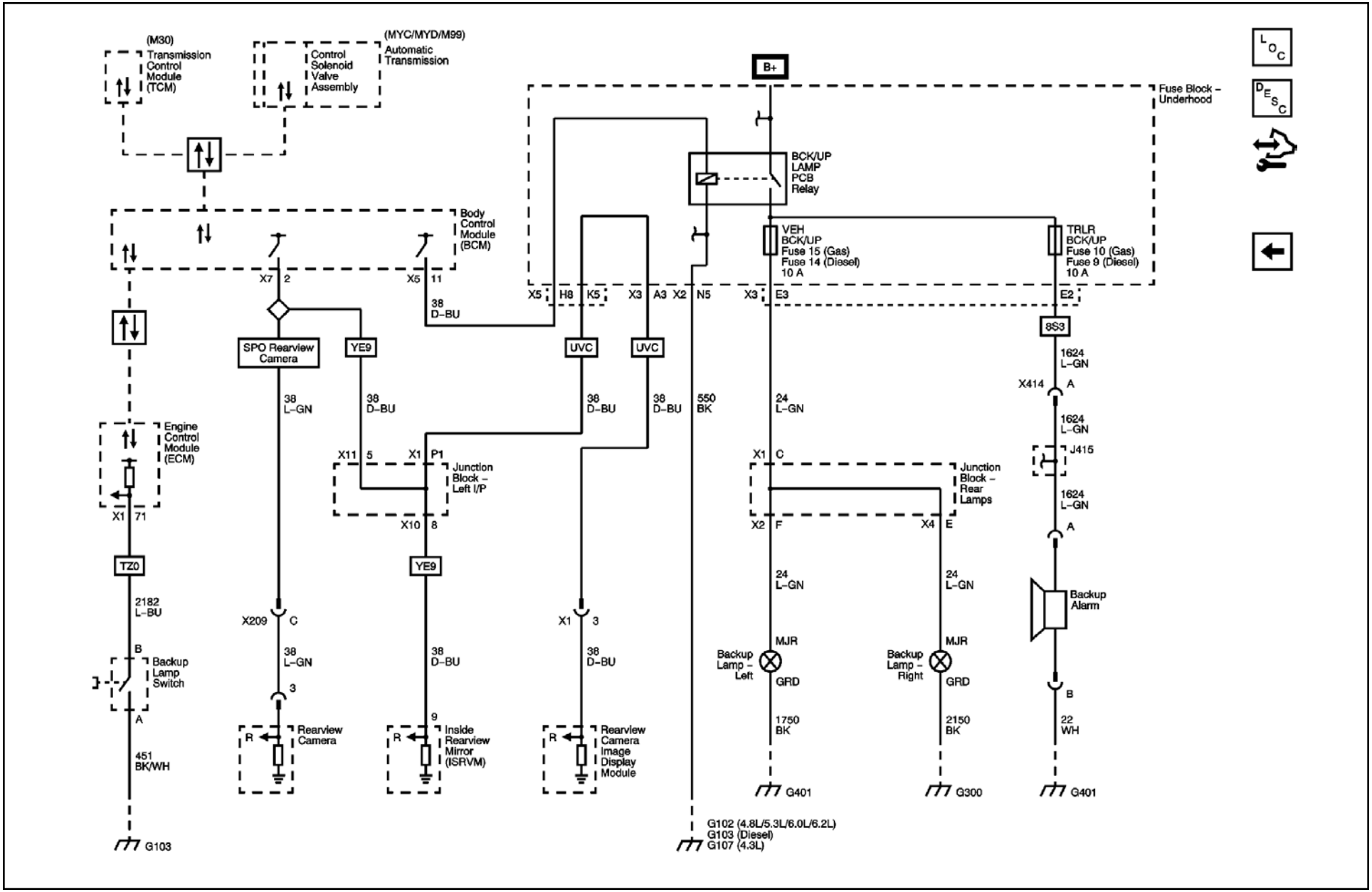
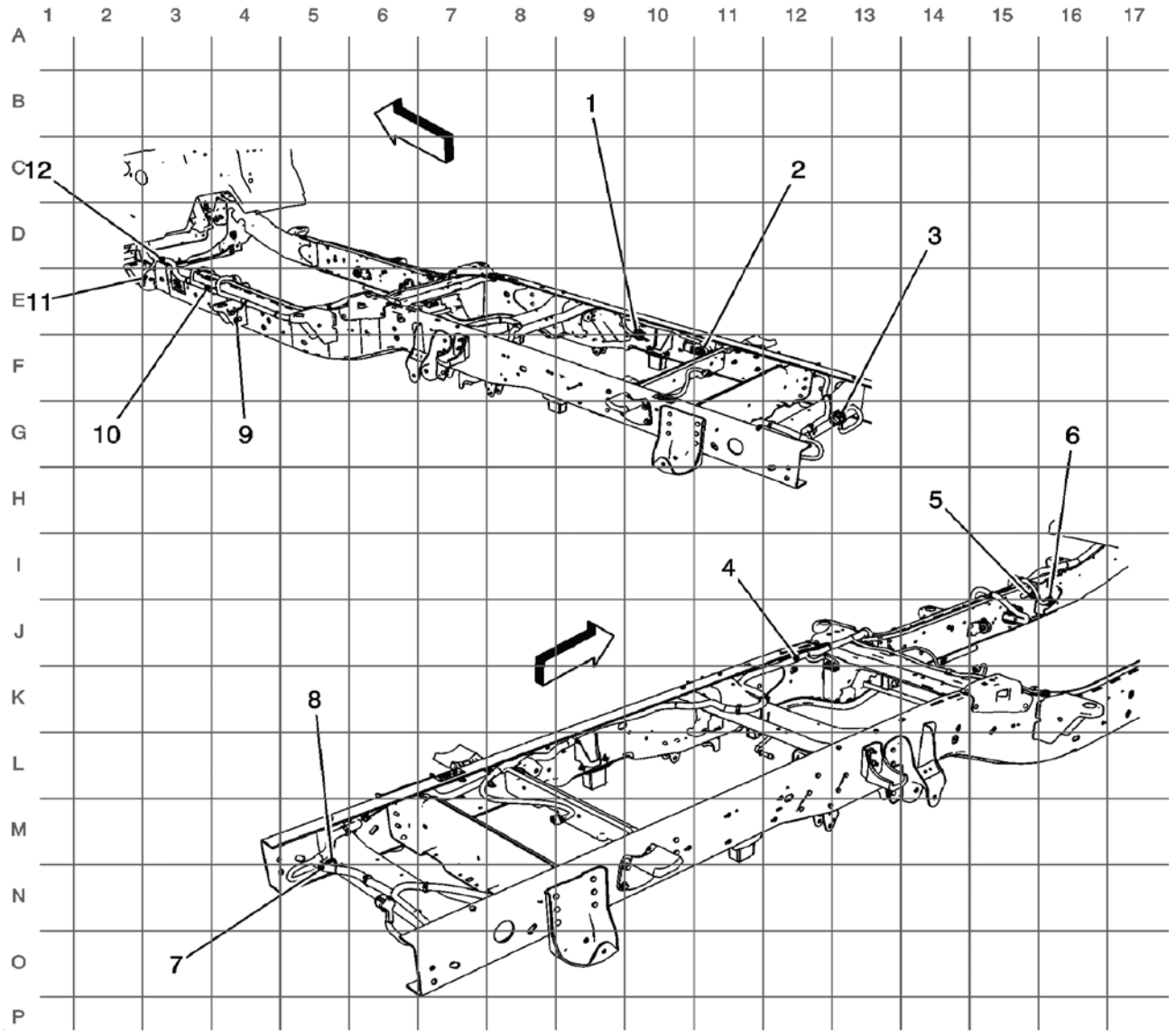
Backup Alarm/Camera - Backup Lamp Schematic

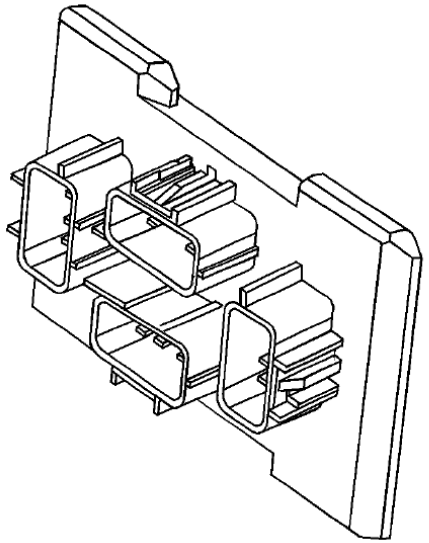


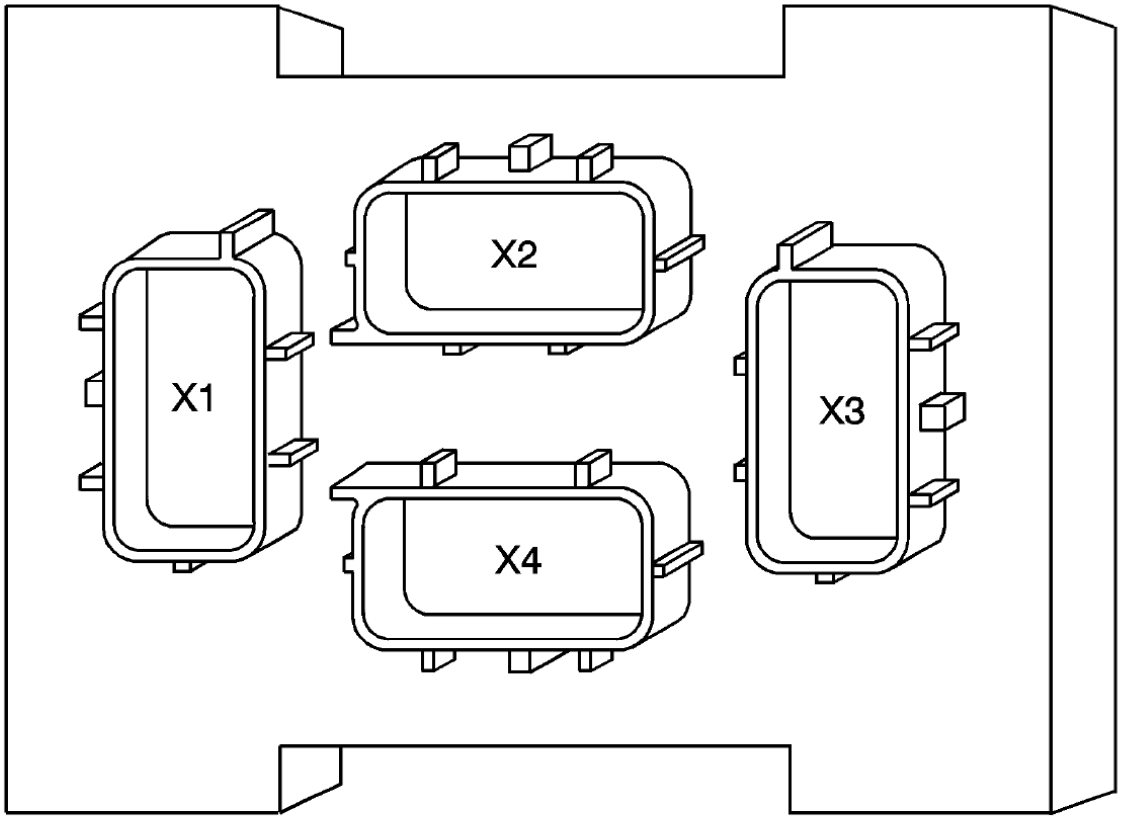
Backup Alarm/Camera - Chassis Harness (31 Series) Routing Diagram



(1) Trailer Brake Control Relay (JL1)
(2) J422 (JL1)
(3) Trailer Connector
(4) J331 (Diesel without NQZ/LY6)
(5) X300 (LY6)
(6) X300 (Diesel)
(7) J411 (JL1)
(8) Junction Block - Rear Lamps
(9) G401
(10) J338 (JL1)
(11) G300
(12) J300 (LY6 without NQZ)

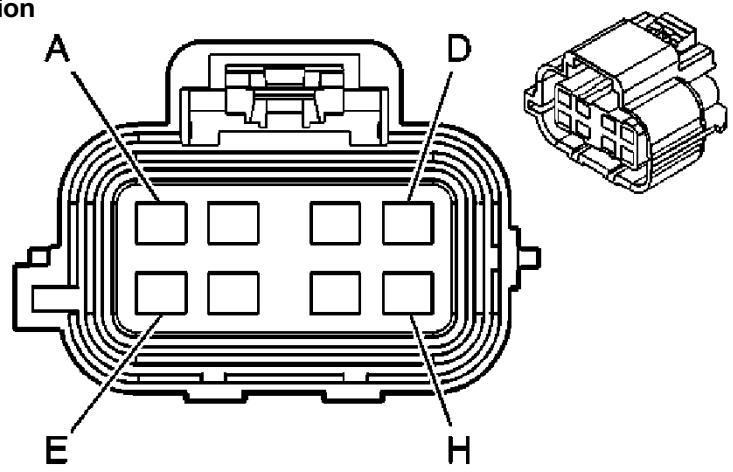
Backup Alarm/Camera - Junction Block - Rear Lamps





Backup Alarm/Camera - Junction Block - Rear Lamps X1

Connector Part Information



Harness: Chassis

OEM: 15317304

Service: 19167008

Description: 8-Way F GT 280 Sealed (BU)

Terminal Part Information

Pins: A, C, D, G, H

Terminal/Tray: 15304716/8

Core/Insulation Crimp: 2/1

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: B, E

Terminal/Tray: 15304717/8

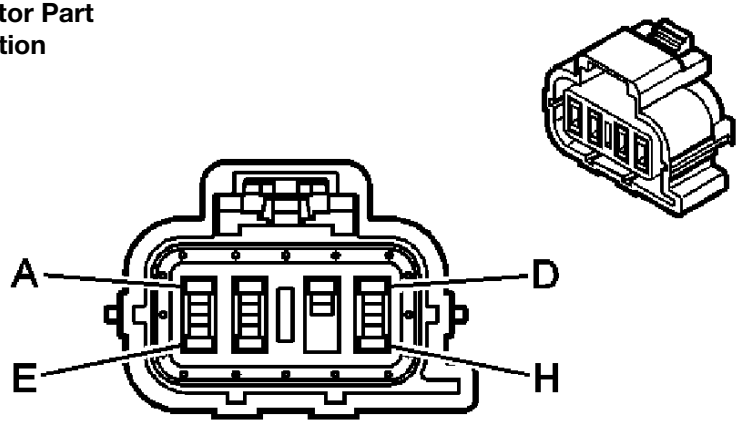
Core/Insulation Crimp: 4/1

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pin	Wire Color	Circuit No.	Function
A	0.8 YE	18	Left Rear Stop/Turn Lamp Supply Voltage
B	2 BK	2150	Ground
C	0.8 L-GN	24	Backup Lamp Supply Voltage
D	0.8 BN	2609	Right Rear Park Lamps Supply Voltage
E	2 BK	1750	Ground (except MEX)
	3 BK	1750	Ground (MEX)
F	--	--	Not Used
G	0.8 BN	2509	Left Rear Park Lamps Supply Voltage
H	0.8 D-GN	19	Right Rear Stop/Turn Lamp Supply Voltage

Backup Alarm/Camera - Junction Block - Rear Lamps X2

Connector Part Information



Harness: Chassis

OEM: 15317305

Service: 15306338

Description: 8-Way F GT 280 Sealed (GY)

Terminal Part Information

Pins: A, C, D, G, H

Terminal/Tray: 15304716/8

Core/Insulation Crimp: 2/1

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: B, E

Terminal/Tray: 15304717/8

Core/Insulation Crimp: 4/1

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

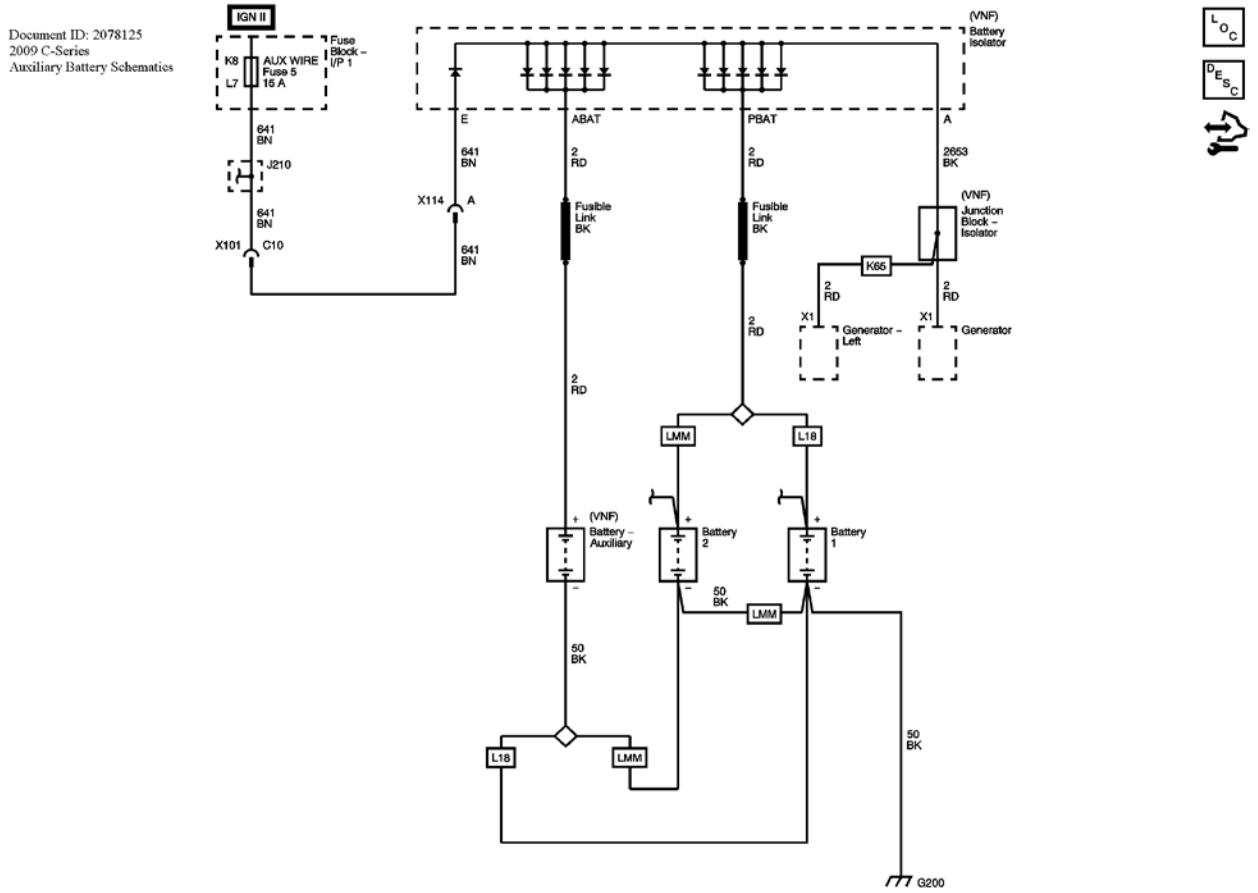
Pin	Wire Color	Circuit No.	Function
A-B	--	--	Not Used
C	0.8 BK	1750	Ground
D	--	--	Not Used
E	0.8 BN	2509	Left Rear Park Lamps Supply Voltage
F	0.8 L-GN	24	Backup Lamp Supply Voltage
G	--	--	Not Used
H	0.8 YE	18	Left Rear Stop/Turn Lamp Supply Voltage

Battery Isolator - Medium Duty Battery Isolator Schematic

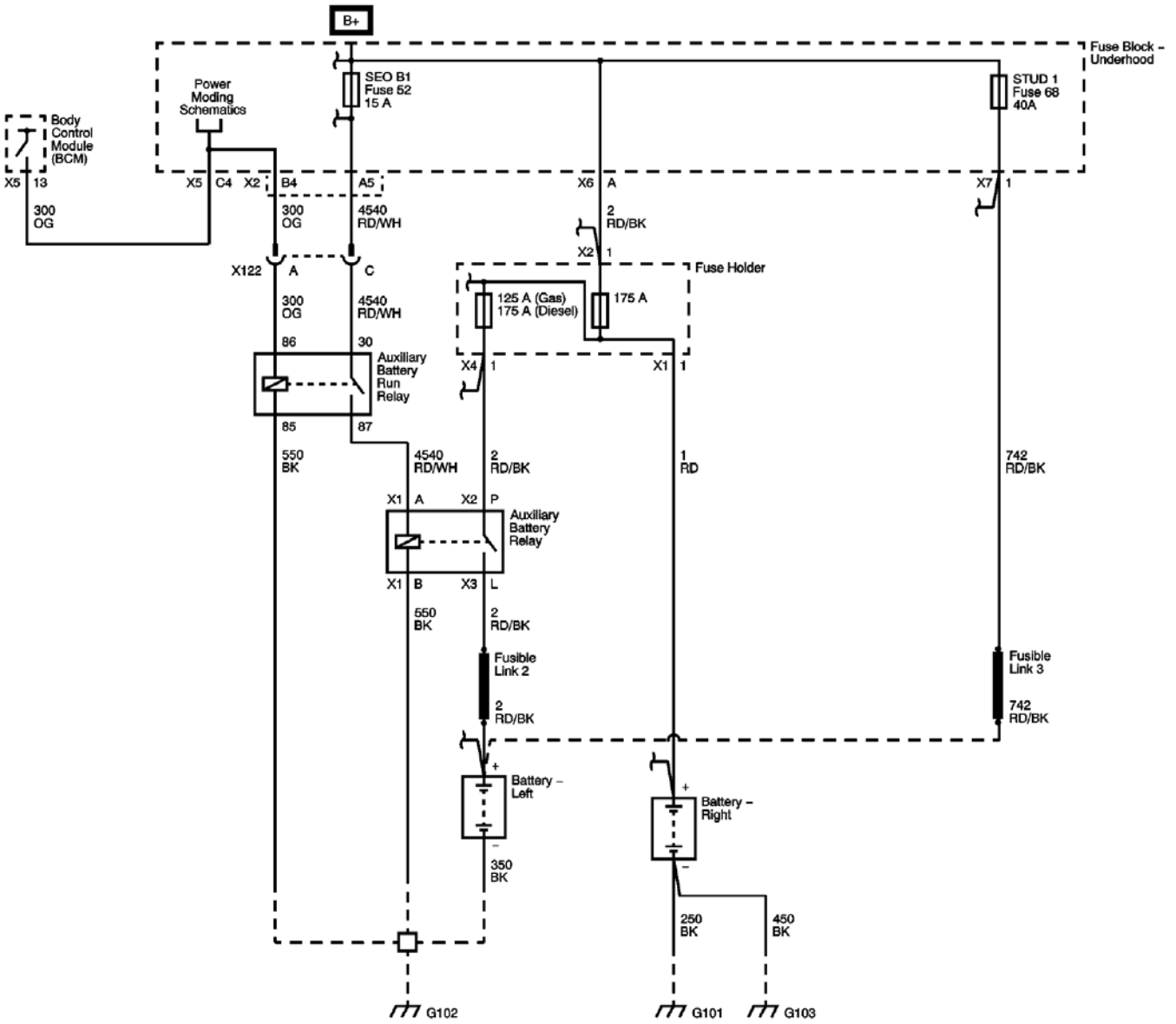
Battery Isolator

Battery isolation can be done in a number of ways. In this section we show you two ways that GM does it. On medium duty trucks we have a diode isolator component that places in line diodes in the battery charge lead going to the alternators. On CK trucks we have a relay isolation scheme. These drawings are provided to show you how you might accomplish your application.

Medium Duty Battery Isolator Schematic



Battery Isolator - Auxiliary Battery Schematic



Battery/Ignition/Ground Feeds -
Installation of Electrical Aftermarket Accessories - Battery, Ignition and Ground Feeds

#08-08-45-004B: Installation of Electrical Aftermarket Accessories-Battery, Ignition and Ground Feeds-Do Not Splice into Wiring Harness (Install Diode to Solenoid/Relay to Suppress Voltage Spikes) - (Nov 17, 2009)

Subject:	Installation of Electrical Aftermarket Accessories -- Battery, Ignition and Ground Feeds -- Do Not Splice into Wiring Harness (Install Diode to Solenoid/Relay to Suppress Voltage Spikes)
Models:	2007-2010 Cadillac Escalade, Escalade ESV, Escalade EXT
	2007-2010 Chevrolet Avalanche, Silverado, Suburban, Tahoe
	2008-2010 Chevrolet Express
	2007-2010 GMC Sierra, Sierra Denali, Yukon, Yukon XL, Yukon Denali, Yukon Denali XL
	2008-2010 GMC Savana

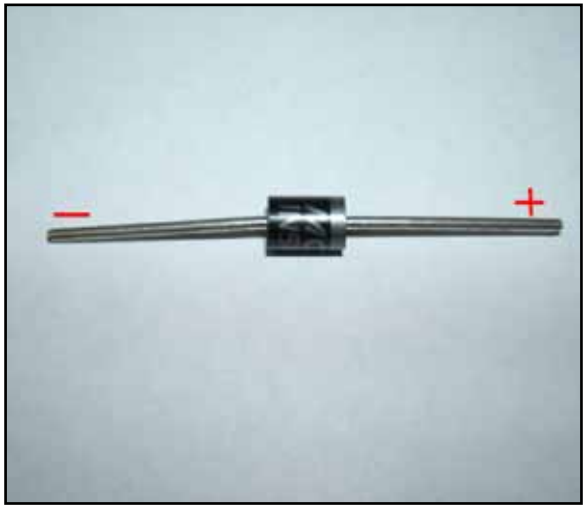
This bulletin is being revised to add the 2010 model year and the Express and Savana models. Please discard Corporate Bulletin Number 08-08-45-004A (Section 08 -- Body and Accessories).

(continued on next page)

Battery/Ignition/Ground Feeds - Installation of Electrical Aftermarket Accessories - Battery, Ignition and Ground Feeds (cont'd)

Installation of a Diode to Suppress Voltage Spikes

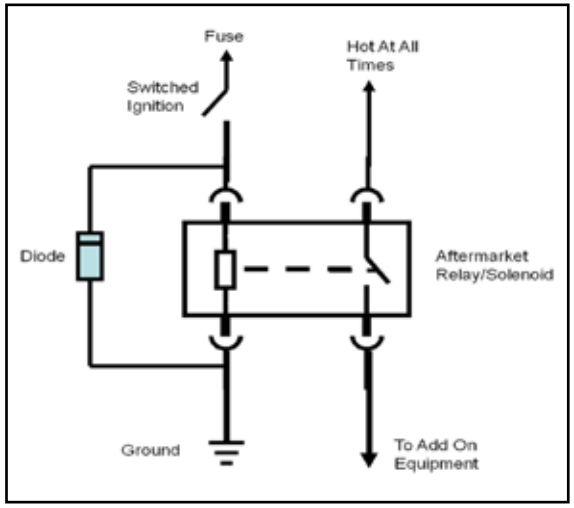
When an electromechanical solenoid or relay is de-energized rapidly by a mechanical switch or semiconductor, the collapsing magnetic field produces a substantial transient voltage in its effort to disperse the stored energy and oppose the sudden change in current flow. These voltage spikes can occur at the positive terminal when the solenoid or relay is de-energized (keyed-off). If a solenoid or relay is wired onto the Run/Crank circuit of the vehicle to control aftermarket equipment, the spikes can be transmitted onto the circuit. The spikes can permanently damage the internal circuitry of the sensitive electronic components and/or control modules that are on this bussed circuit. To prevent damage to these components, the solenoid or relay MUST have the control circuit suppressed with a diode.



Install a diode, P/N 12112422, across the coil of the solenoid. It is important that the striped end of the diode be connected to the positive terminal of the coil and the other end of the diode be connected to ground.

Important: Be sure to insulate the diode with heat shrink tubing before installing as shown in the picture above.

Notice: Some solenoids/relays may only have a positive post and will get their ground through the mounting bracket. In this case, the striped end of the diode is to be connected to the positive terminal and the other end should be connected to the ground of the solenoid/relay.



Install a diode, P/N 12112422, across the coil of the relay. It is important that the striped end of the diode be connected to the positive terminal of the coil and the other end of the diode be connected to ground. Be sure to insulate the diode with heat shrink tubing before installing.

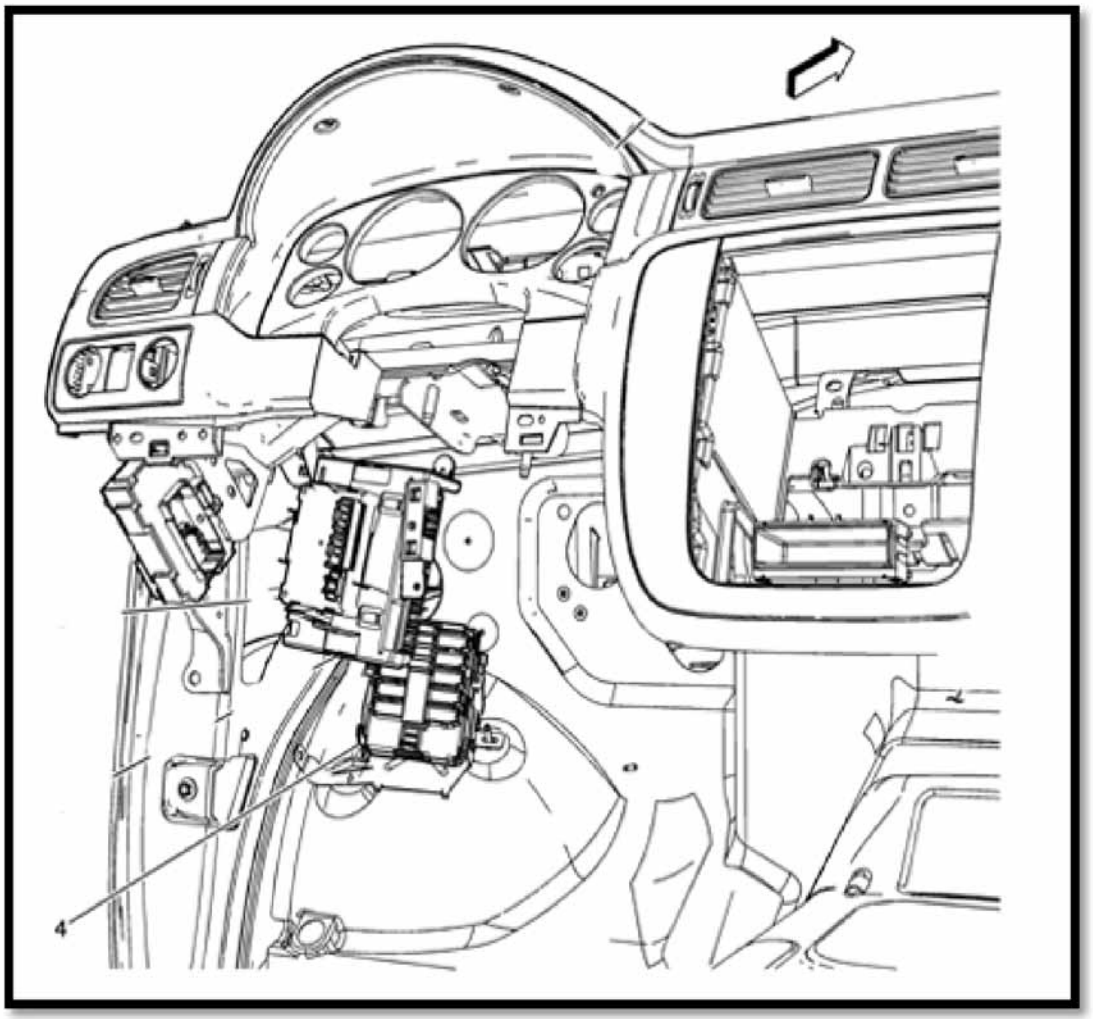
There are two different areas on a fullsize truck or utility vehicle that power and grounds can be acquired without having to splice or cut into the existing wiring. One is the MBEC and the other is the UBEC.

(continued on next page)

Battery/Ignition/Ground Feeds - Installation of Electrical Aftermarket Accessories - Battery, Ignition and Ground Feeds (cont'd)

MBEC -- Mid-Bussed Electrical Connector

The MBEC is located below the instrument panel to the left of the brake pedal (#4 in the graphic points to the MBEC).



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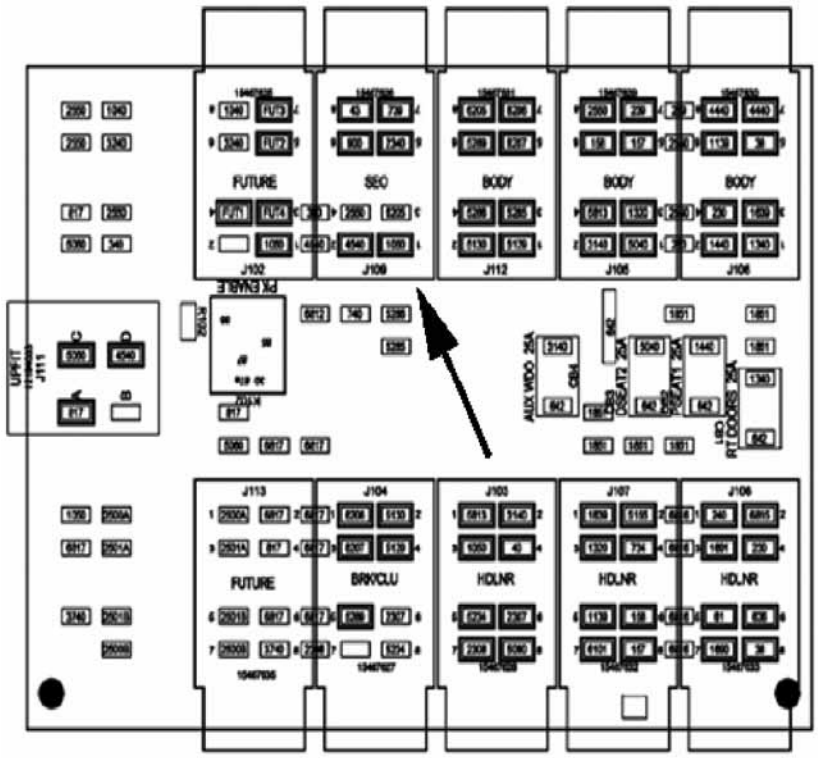
Battery/Ignition/Ground Feeds - Installation of Electrical Aftermarket Accessories - Battery, Ignition and Ground Feeds (cont'd)

The MBEC has 10 positions for connecting electrical connectors. One of these positions is designated for aftermarket utilization. Install a connector (P/N 20791502) into the open position identified in the following graphic.

Within this connector, there is a fused 30 Amp battery feed, a fused 15 Amp battery feed, a fused 10 Amp Run/Crank feed, a 300 milliamp RAP (Retained Accessory Power) feed and a ground.

Location of Connector for Aftermarket Utilization:



Important: Connector P/N 20791502 comes with a one wire lead installed. This lead will need to be removed before the connector is pinned for use with aftermarket electrical devices.

The pin out of the connector is as follows:

Cavity	Circuit Description	Circuit Number	Fuse Size
1	Ground	1050	NA
2	Battery Feed	4540	15 Amps
3	Not Used	--	--
4	Not Used	--	--
5	Battery Feed	2340	30 Amps
6	Not Used	--	--
7	Run/Crank Feed	739	10 Amps
8	RAP Feed	43	300 milliamps

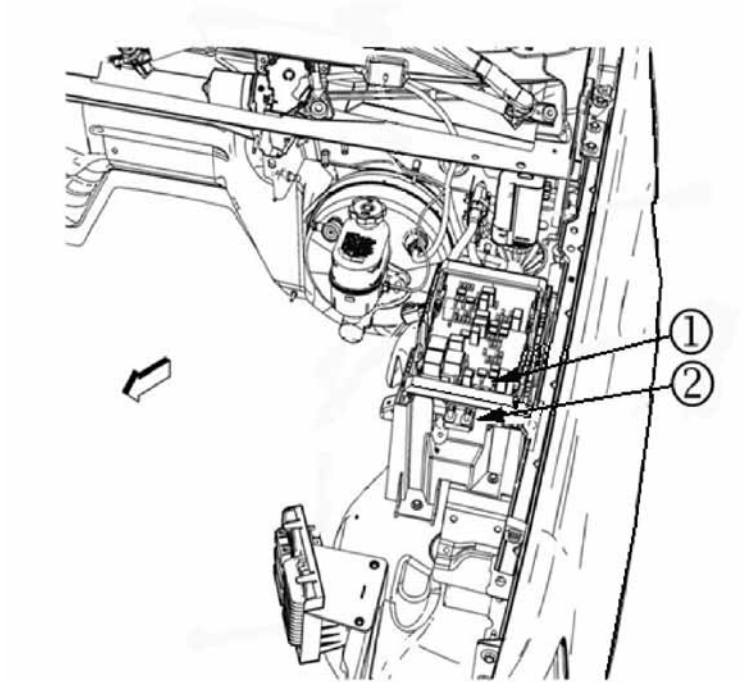
(continued on next page)

Battery/Ignition/Ground Feeds - Installation of Electrical Aftermarket Accessories - Battery, Ignition and Ground Feeds (cont'd)

UBEC -- Underhood Bussed Electrical Center

On vehicles not equipped with an Auxiliary Battery (Auxiliary Battery RPO TP2), there is a stud that could be used for a fused battery feed at the UBEC. The UBEC is located on the left side of the engine compartment (refer to graphic).

Connecting Aftermarket Electrical Devices On Vehicles Not Equipped with TP2:



Important: A J-case fuse (1) with a 40 amp maximum rating MUST be inserted into this position (1) for the stud (2) to be powered.

Outboard M6 stud (2) can be used for a fused battery feed.

Wire Gauge Selection

For any of these powered connections to be used, Circuit Protection Guidelines must be followed to assure that the circuit gauge is selected appropriately so that it will be protected by the fuse in case of a short circuit.

Parts Information

Part Number	Description	Qty
12112422	Diode	1

Electrical Charging System Description and Operation

ELECTRICAL POWER MANAGEMENT (EPM) OVERVIEW

The electrical power management (EPM) system is designed to monitor and control the charging system and send diagnostic messages to alert the driver of possible problems with the battery and generator. This EPM system primarily utilizes existing on-board computer capability to maximize the effectiveness of the generator, to manage the load, improve battery state-of-charge and life, and minimize the system's impact on fuel economy. The EPM system performs 3 functions:

- It monitors the battery voltage and estimates the battery condition.
- It takes corrective actions by boosting idle speeds, and adjusting the regulated voltage.
- It performs diagnostics and driver notification.

The battery condition is estimated during ignition-off and during ignition-on. During ignition-off the state-of-charge (SOC) of the battery is determined by measuring the open-circuit voltage. The SOC is a function of the acid concentration and the internal resistance of the battery, and is estimated by reading the battery open circuit voltage when the battery has been at rest for several hours.

The SOC can be used as a diagnostic tool to tell the customer or the dealer the condition of the battery. Throughout ignition-on, the algorithm continuously estimates SOC based on adjusted net amp hours, battery capacity, initial SOC, and temperature.

While running, the battery degree of discharge is primarily determined by a battery current sensor, which is integrated to obtain net amp hours.

In addition, the EPM function is designed to perform regulated voltage control (RVC) to improve battery SOC, battery life, and fuel economy. This is accomplished by using knowledge of the battery SOC and temperature to set the charging voltage to an optimum battery voltage level for recharging without detriment to battery life.

The Charging System Description and Operation is divided into 3 sections. The first section describes the charging system components and their integration into the EPM. The second section describes charging system operation. The third section describes the instrument panel cluster (IPC) operation of the charge indicator, driver information center (DIC) messages, and voltmeter operation.

(continued on next page)

Electrical Charging System Description and Operation (cont'd)

CHARGING SYSTEM COMPONENTS

Generator

The generator is a serviceable component. If there is a diagnosed failure of the generator it must be replaced as an assembly. The engine drive belt drives the generator. When the rotor is spun it induces an alternating current (AC) into the stator windings. The AC voltage is then sent through a series of diodes for rectification. The rectified voltage has been converted into a direct current (DC) for use by the vehicles electrical system to maintain electrical loads and the battery charge. The voltage regulator integral to the generator controls the output of the generator. It is not serviceable. The voltage regulator controls the amount of current provided to the rotor. If the generator has field control circuit failure, the generator defaults to an output voltage of 13.8 volts.

Body Control Module (BCM)

The body control module (BCM) is a GMLAN device. It communicates with the engine control module (ECM) and the instrument panel cluster (IPC) for electrical power management (EPM) operation. The BCM determines the output of the generator and sends the information to the ECM for control of the generator field control circuit. It monitors the generator field duty cycle signal circuit information sent from the ECM for control of the generator. It monitors a battery current sensor, the battery positive voltage circuit, and estimated battery temperature to determine battery state of charge (SOC). The BCM sends idle boost requests to the ECM.

Battery Current Sensor

The battery current sensor is a serviceable component that is connected to the negative battery cable at the battery. The battery current sensor is a 3-wire hall effect current sensor. The battery current sensor monitors the battery current. It directly inputs to the BCM. It creates a 5 volt pulse width modulation (PWM) signal of 128 Hz with a duty cycle of 0-100 percent. Normal duty cycle is between 5-95 percent. Between 0-5 percent and 95-100 percent are for diagnostic purposes.

Engine Control Module (ECM)

The ECM directly controls the generator field control circuit input to the generator. The ECM receives control decisions based on messages from the BCM. It monitors the generators generator field duty cycle signal circuit and sends the information to the BCM.

Instrument Panel Cluster (IPC)

The IPC provides a means of customer notification in case of a failure and a voltmeter. There are 2 means of notification, a charge indicator and the driver information center (DIC) SERVICE BATTERY CHARGING SYSTEM message.

(continued on next page)

Electrical Charging System Description and Operation (cont'd)

CHARGING SYSTEM OPERATION

The purpose of the charging system is to maintain the battery charge and vehicle loads. There are 6 modes of operation and they include:

- Battery Sulfation Mode
- Charge Mode
- Fuel Economy Mode
- Headlamp Mode
- Start Up Mode
- Voltage Reduction Mode

The engine control module (ECM) controls the generator through the generator turn on signal. It monitors the generator performance though the generator field duty cycle signal circuit. The signal is a 5 volt pulse width modulation (PWM) signal of 128 Hz with a duty cycle of 0-100 percent. Normal duty cycle is between 5-95 percent. Between 0-5 percent and 95-100 percent are for diagnostic purposes. The following table shows the commanded duty cycle and output voltage of the generator:

Commanded Duty Cycle	Generator Output Voltage
10%	11 V
20%	11.56 V
30%	12.12 V
40%	12.68 V
50%	13.25 V
60%	13.81 V
70%	14.37 V
80%	14.94 V
90%	15.5 V

The generator provides a feedback signal of the generator voltage output through the generator field duty cycle signal circuit to the ECM. This information is sent to the body control module (BCM). The signal is a 5 volt PWM signal of 128 Hz with a duty cycle of 0-100 percent. Normal duty cycle is between 5-99 percent. Between 0-5 percent and 100 percent are for diagnostic purposes.

Battery Sulfation Mode

The BCM will enter this mode when the interpreted generator output voltage is less than 13.2 volts for 45 minutes. When this condition exists the BCM will enter Charge Mode for 2-3 minutes. The BCM will then determine which mode to enter depending on voltage requirements.

(continued on next page)

Electrical Charging System Description and Operation (cont'd)

Charge Mode

The BCM will enter Charge Mode when ever one of the following conditions are met.

- The wipers are ON for more than 3 seconds.
- The GMLAN Climate Control Voltage Boost Mode Request is true, as sensed by the HVAC control head. High speed cooling fan, rear defogger and HVAC high speed blower operation can cause the BCM to enter the Charge Mode.
- The estimated battery temperature is less than 0°C (32°F).
- Battery state of charge is less than 80 percent.
- Vehicle speed is greater than 145 km/h (90 mph)
- Current sensor fault exists
- System voltage was determined to be below 12.56 volts
- Tow/Haul mode is enabled

When any one of these conditions is met, the system will set targeted generator output voltage to a charging voltage between 13.9-15.5 volts, depending on the battery state of charge and estimated battery temperature.

Fuel Economy Mode

The BCM will enter Fuel Economy Mode when the ambient air temperature is at least 0°C (32°F) but less than or equal to 80°C (176°F), the calculated battery current is less than 15 amps and greater than -8 amps, and the battery state of charge (SOC) is greater than or equal to 80 percent. Its targeted generator output voltage is the open circuit voltage of the battery and can be between 12.5-13.1 volts. The BCM will exit this mode and enter Charge Mode when any of the conditions described above are present.

Headlamp Mode

The BCM will enter Headlamp Mode when the headlamps are ON. Voltage will be regulated between 13.9-14.5 volts

Start Up Mode

When the engine is started the BCM sets a targeted generator output voltage of 14.3 volts for 30 seconds.

Voltage Reduction Mode

The BCM will enter Voltage Reduction Mode when the calculated battery temperature is above 0°C (32°F). The calculated battery current is less than 1 amp and greater than -7 amps, and the generator field duty cycle is less than 99 percent. Its targeted generator output voltage is 13 volts. The BCM will exit this mode once the criteria are met for Charge Mode.

(continued on next page)

Electrical Charging System Description and Operation (cont'd)

Auxiliary Battery Charging (TP2)

The auxiliary battery provision (TP2) can be used to supply electrical power to additional equipment that the customer may choose to add, such as a slide-in camper or trailer, without discharging the vehicles primary battery. The auxiliary battery relay closes when the engine is running, in order to allow the generator to charge the auxiliary battery. The relay opens when the engine is off, so that the accessories will not discharge the vehicles primary battery, which is used for engine starting. If the vehicle is equipped with an auxiliary battery, the relay will be located on the driver's side of the vehicle, next to the underhood electrical center. Generally, a fuse should not be used in the STUD 1 Fuse 68 position of the underhood fuse block, if the vehicle is equipped with an auxiliary battery. A plastic plug may be installed in this position instead of a fuse. If a fuse is installed in this position, the accessories will discharge the primary battery in addition to the auxiliary battery.

INSTRUMENT PANEL CLUSTER (IPC) OPERATION

Charge Indicator Operation

The instrument panel cluster (IPC) illuminates the charge indicator and displays a warning message in the driver information center (DIC) when the one or more of the following occurs:

- The engine control module (ECM) detects that the generator output is less than 11 volts or greater than 16 volts. The IPC receives a GMLAN message from the ECM requesting illumination.
- The BCM determines that the system voltage is less than 11 volts or greater than 16 volts.
- The IPC receives a GMLAN message from the body control module (BCM) indicating there is a system voltage range concern.
- The IPC performs the displays test at the start of each ignition cycle. The indicator illuminates for approximately 3 seconds.
- The ignition is ON, with the engine OFF.

Battery Voltage Gauge Operation

The IPC displays the system voltage as received from the BCM over the GMLAN serial data circuit. If there is no communication with the BCM then the gauge will indicate minimum.

This vehicle is equipped with a regulated voltage control (RVC) system. This system turns off the generator when it is not required in order to improve fuel economy. The generator will turn back on when additional voltage is required. This will cause the voltmeter to fluctuate between 12 and 14 volts as opposed to non-regulated systems which usually maintain a more consistent reading of 14 volts. This fluctuation with the RVC system is normal system operation and NO repairs should be attempted.

Service Battery Charging System

The BCM and the ECM will send a GMLAN message to the DIC for the SERVICE BATTERY CHARGING SYSTEM message to be displayed. It is commanded ON when a charging system DTC is a current DTC. The message is turned OFF when the conditions for clearing the DTC have been met.

Engine Idle Up

ELEVATED IDLE / PTO / HIGH IDLE ARE ALL DIFFERENT OPTIONS

There have been some questions regarding the differences between Elevated Idle, PTO, and High Idle. The below information is to help provide additional information as to what each of the options are:

Elevated Idle

Is a standard option on all 6.6L Diesel Engines, which elevates the engine idle speed from base idle to 1050 rpms when outside temperatures are below 32°F (0°C) and the engine coolant temperature is below 150°F (65°C). This feature enhances heater performance by raising the engine coolant temperature faster. It can be turned on or off, please refer to the "Duramax Diesel Supplement" Owner's Manual for more information.

PTO (power take-off)

Is available as an option (RPO PTO) only on 3500 Chassis Cab models equipped with the 6.6L Diesel Engine RPO LMM and Allison 6-speed transmission RPO MW7. The PTO allows the user to create an auxiliary power source for running add-on equipment, such as salt spreaders, pumps, winches, lift buckets, etc. The dash mounted PTO switch is used to turn on the PTO and controls engine speed to values higher than normal base idle. Refer to UI Bulletins #79 and #80 on our website www.gmupfitter.com.

High Idle

Is available as an option (RPO UF3) on certain HD models with cruise control. This system can be used to increase your engine idle speed for whatever reason an owner wishes: more generator output at idle, belt driven add on equipment, etc. The cruise control buttons located on the left hand side of the steering wheel are used to operate the High Idle option. If the option was available for your vehicle, and it could have been built with it, you can add it. Check the online order guide to determine if your vehicle could have been built with option UF3.
http://eogld.ecomm.gm.com/dmdindex.htm

(continued on next page)

Engine Idle Up (cont'd)

ADDING PTO OPTION TO A VEHICLE WITHOUT THE OPTION

Condition/Concern:

Some owners may request to add the PTO option to their vehicle when it is not equipped with the option. This option is available on 3500 Chassis Cab Models with the 6.6L Diesel engine only. The PTO option is now far more integrated with the vehicle than past models and utilizes the following components:

- The body control module (BCM)
- The engine control module (ECM)
- The instrument panel cluster (IPC)
- The PTO gear
- The PTO mode select switch
- The power take off module (PTOM)
- The remote PTO enable switch
- The PTO relay
- The transmission control module (TCM)

Recommendation/Instructions:

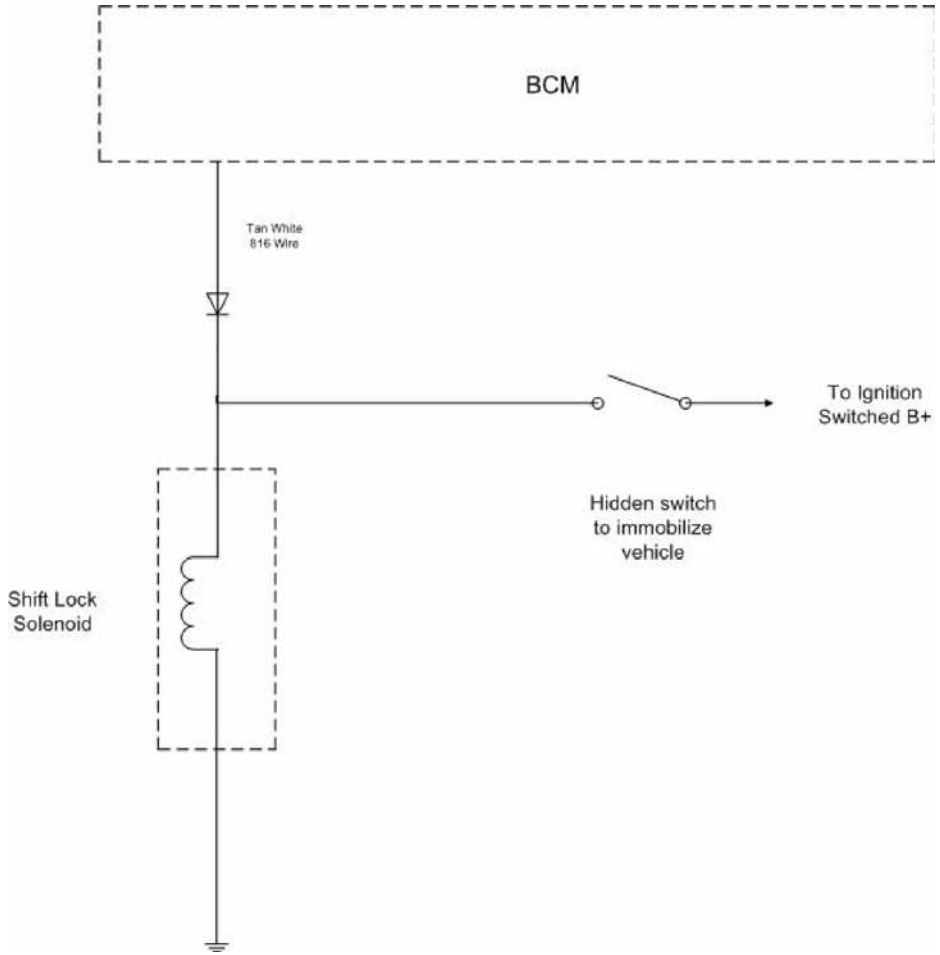
Due to the PTO's complex integration with the vehicle it is NOT recommended to add this option to any vehicle not already equipped with the OEM PTO option.

Immobilizer

Remote Vehicle Immobilizer

For applications where it is desirable to leave the vehicle running but assure that it cannot be moved an external +12 v signal can be supplied to the shift interlock solenoid assuring the vehicle will remain in park – see schematic and location drawings.

Remote Vehicle Immobilizer Schematic



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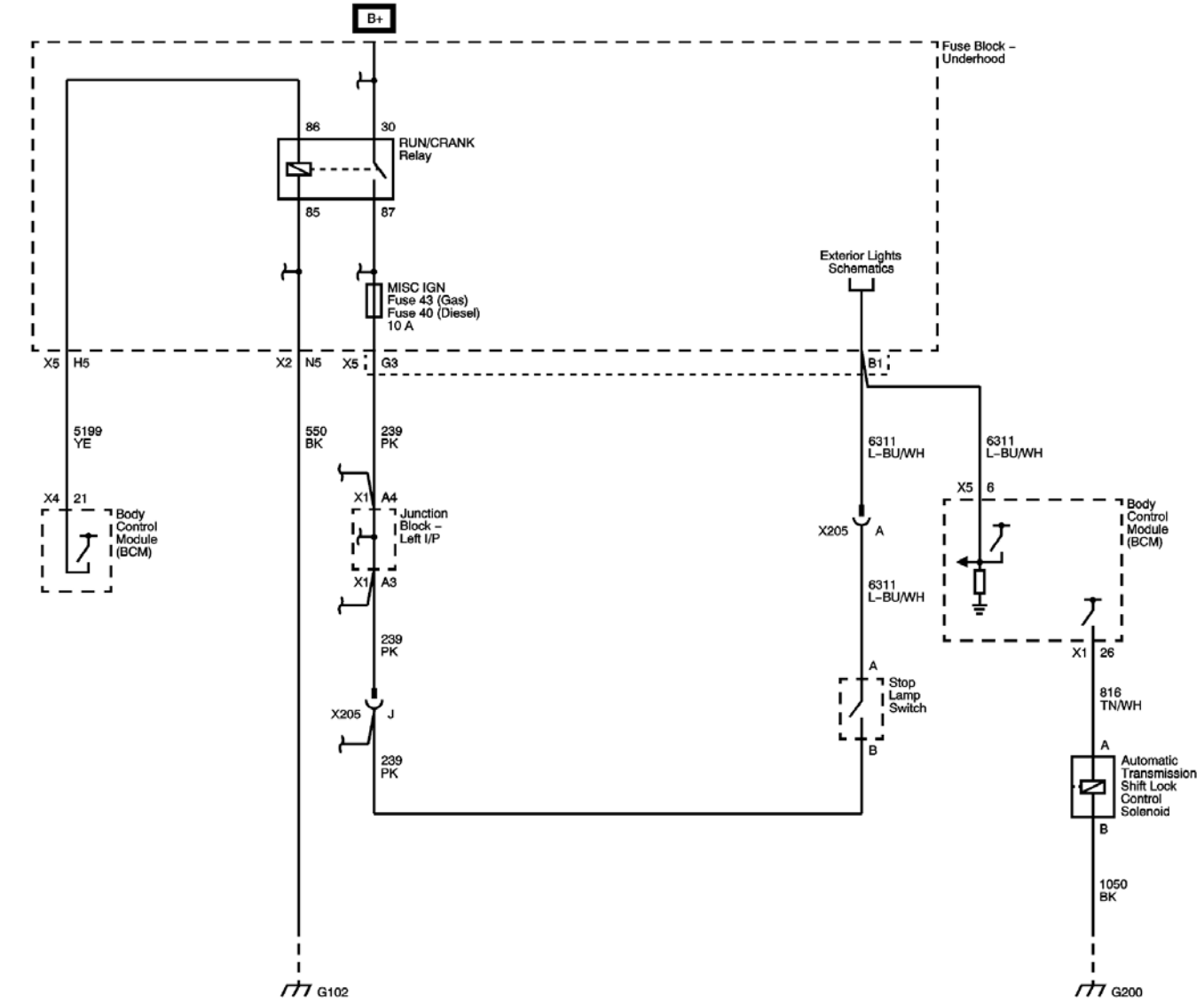
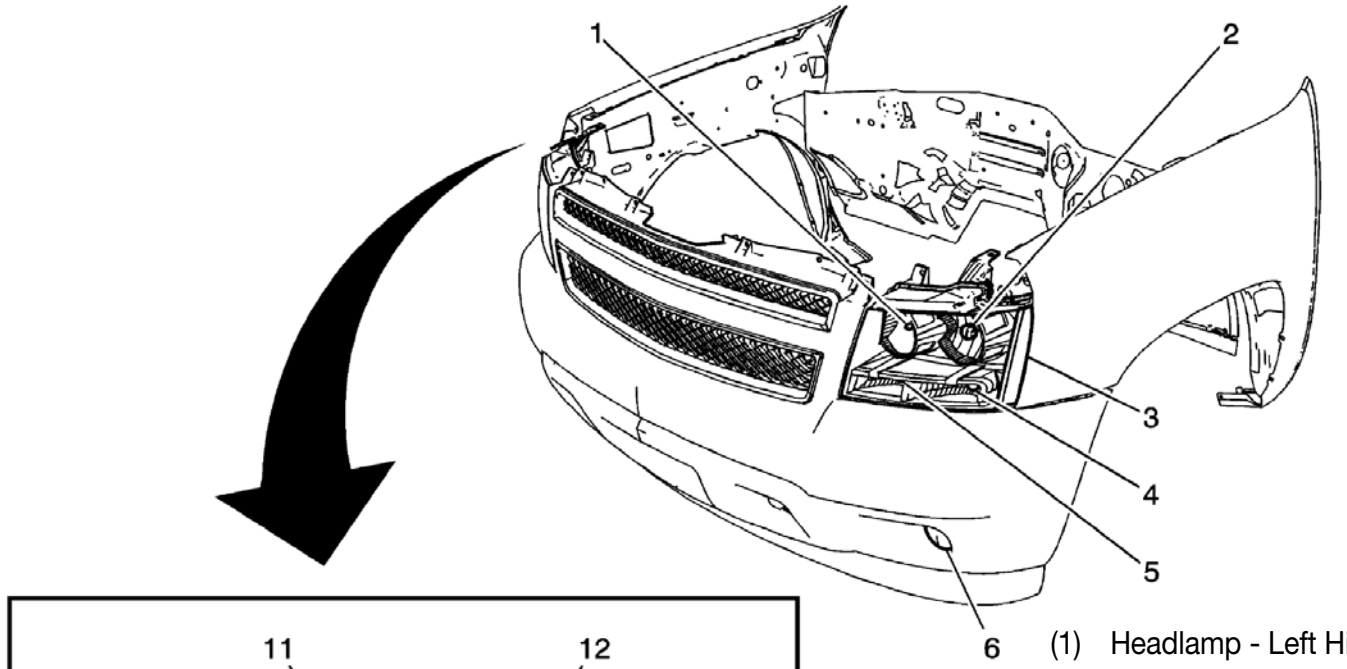
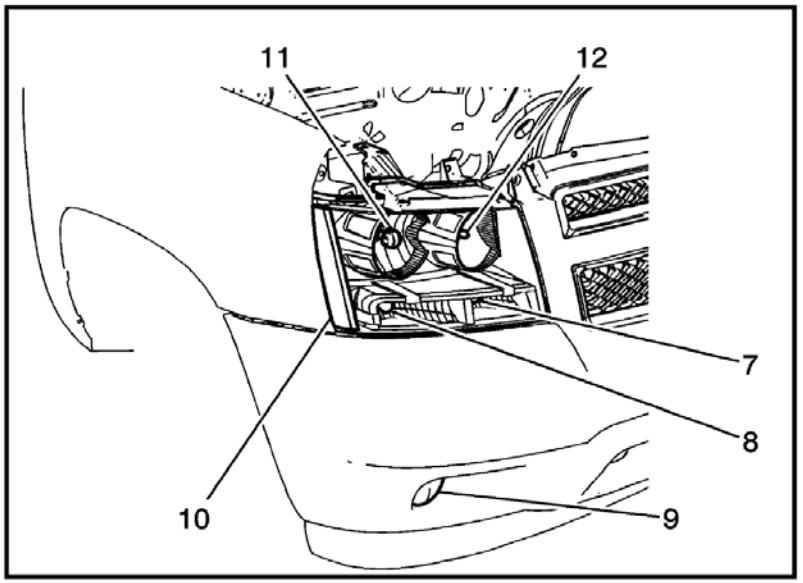
Immobilizer (cont'd)

Remote Vehicle Location Drawing



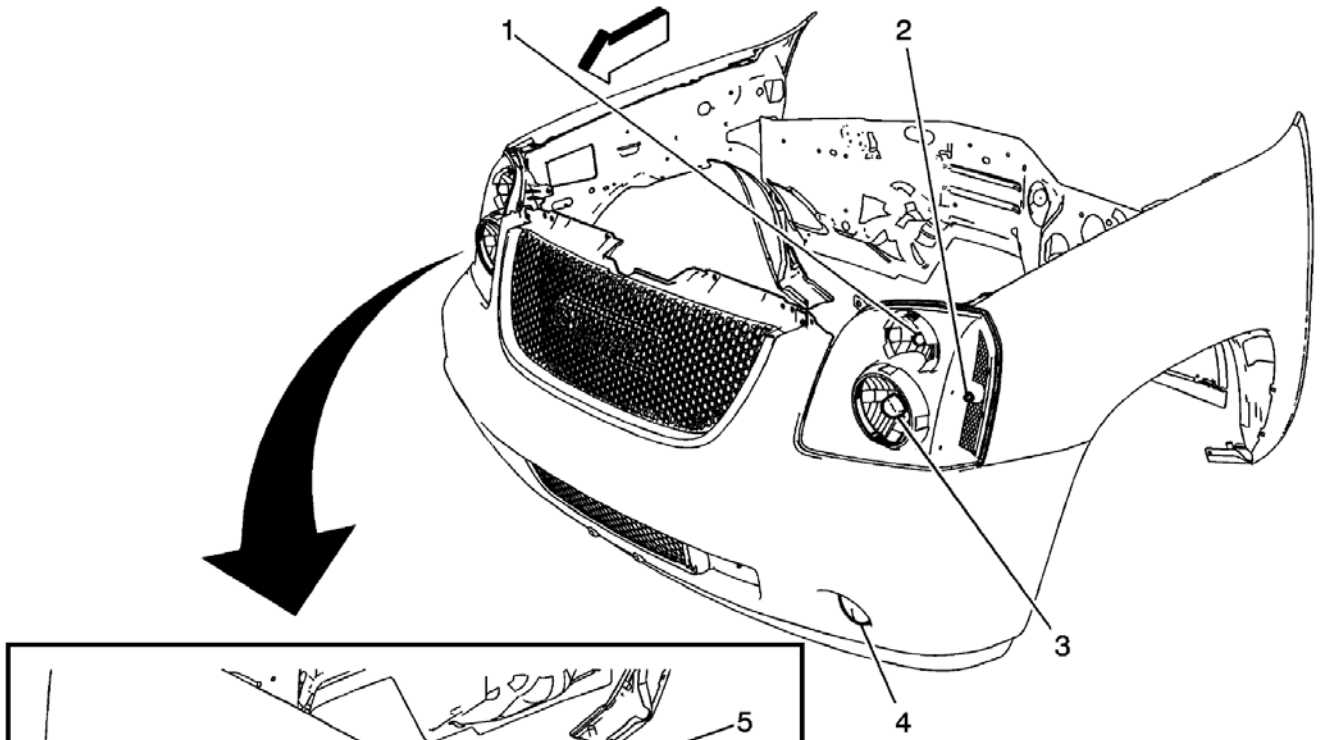
Forward Lighting - Front of Vehicle Components (X88)

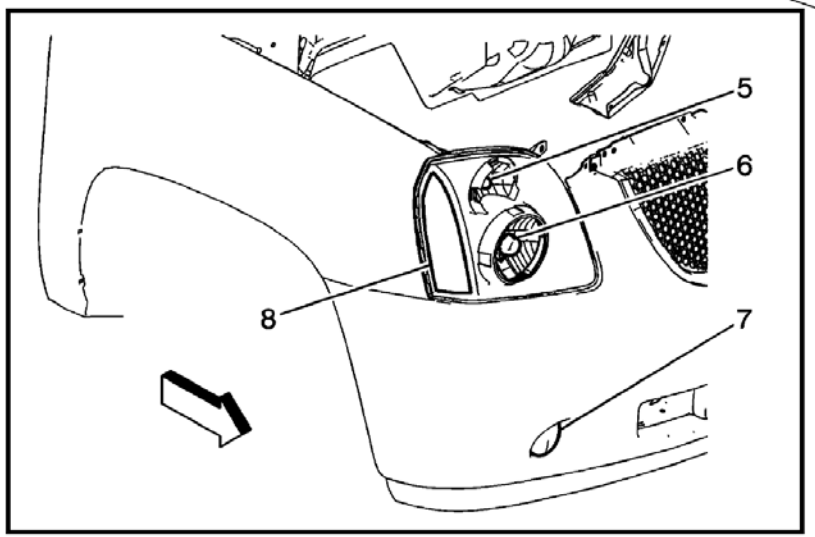




(1) Headlamp - Left High Beam
(2) Headlamp - Left Low Beam
(3) Side Marker Lamp - Left Front
(4) Park/Turn Signal Lamp - Left
(5) Daytime Running Lamp (DRL) - Left
(6) Fog Lamp - Left Front (T96)
(7) Daytime Running Lamp (DRL) - Right
(8) Park/Turn Signal Lamp - Right
(9) Fog Lamp - Right Front (T96)
(10) Side Marker Lamp - Right Front
(11) Headlamp - Right Low Beam
(12) Headlamp - Right High Beam

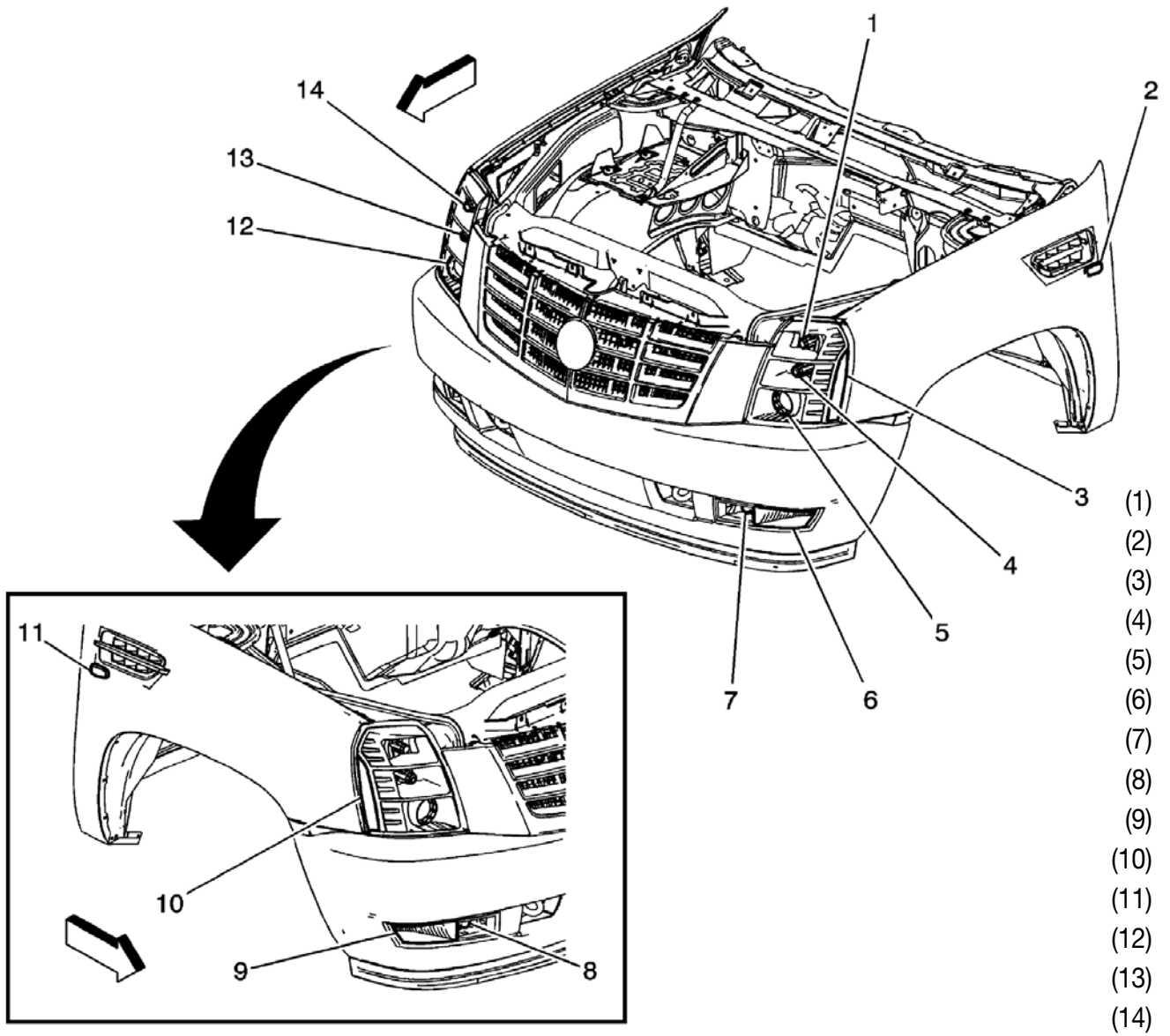
Forward Lighting - Front of Vehicle Components (Z88)





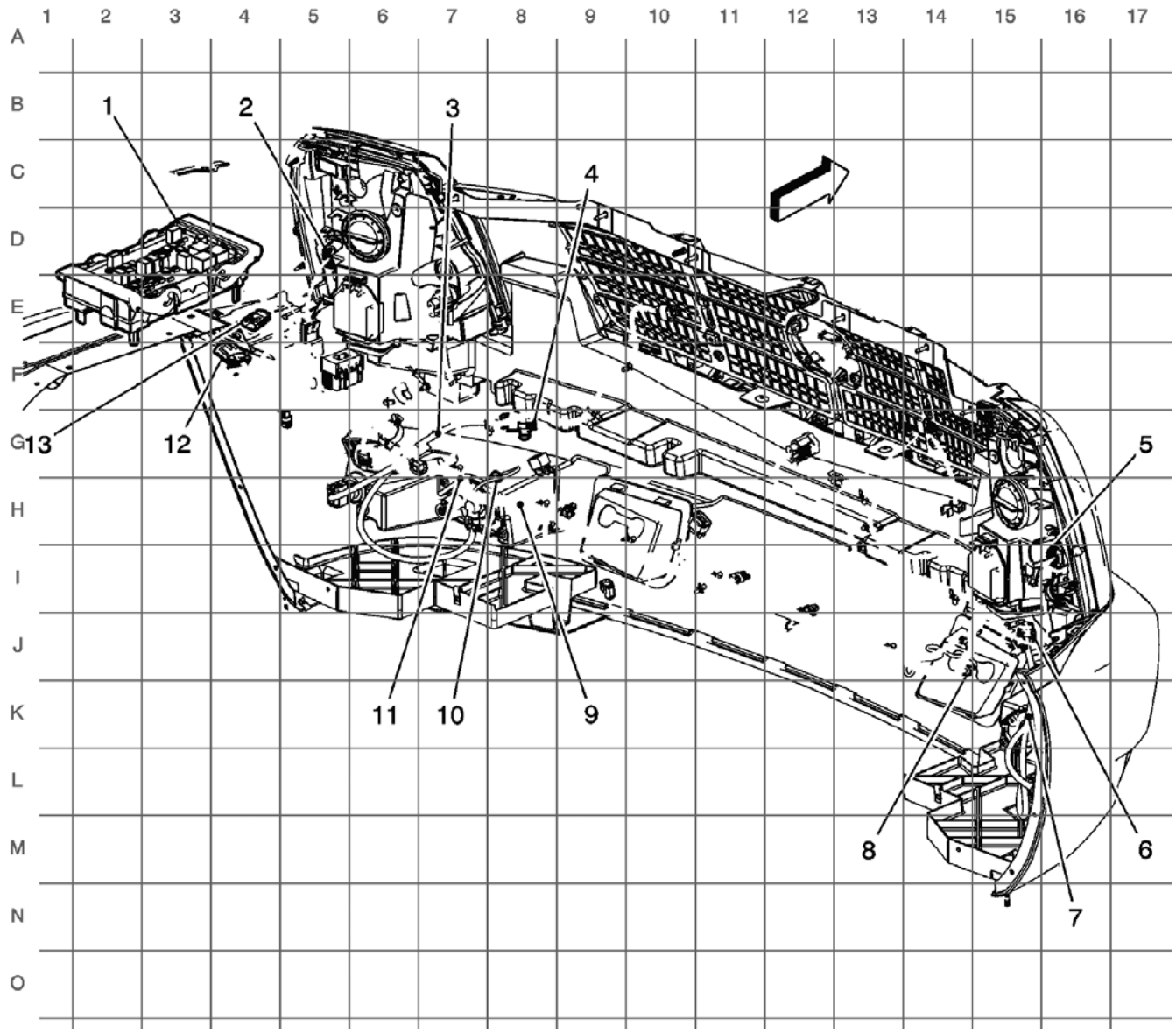
(1) Park/Turn Signal Lamp - Left
(2) Side Marker Lamp - Left Front
(3) Headlamp - Left
(4) Fog Lamp - Left Front (T96)
(5) Park/Turn Signal Lamp - Right
(6) Headlamp - Right
(7) Fog Lamp - Right Front (T96)
(8) Side Marker Lamp - Right Front

Forward Lighting - Front of Vehicle Components (Z75)



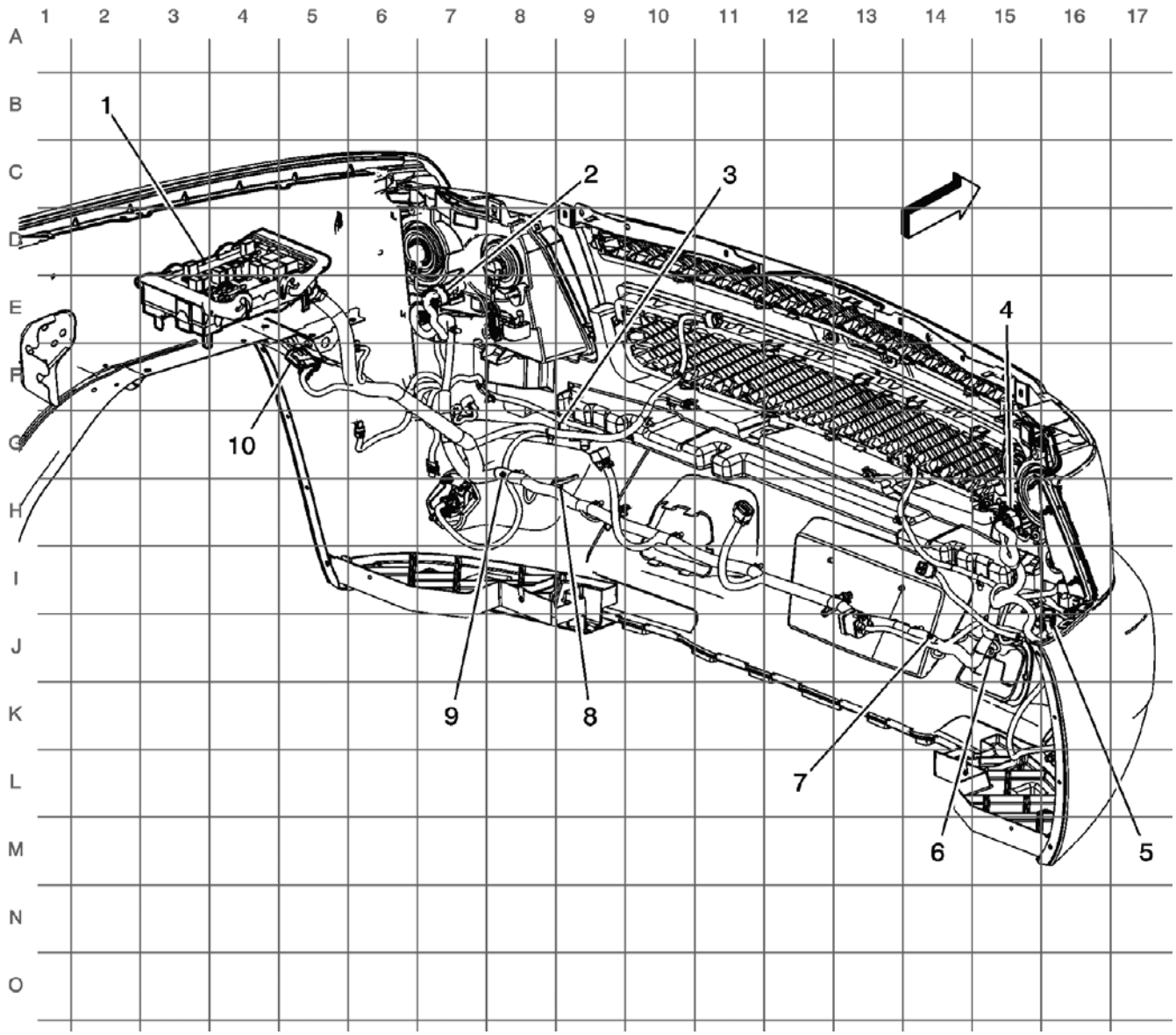
(1) Park Lamp - Left Front (Z75)
(2) Repeater Lamp - Left Front (TR2)
(3) Side Marker Lamp - Left Front
(4) Daytime Running Lamp (DRL) - Left
(5) Headlamp - Left
(6) Turn Signal Lamp - Left Front
(7) Fog Lamp - Left Front (T96)
(8) Fog Lamp - Right Front (T96)
(9) Turn Signal Lamp - Right Front
(10) Side Marker Lamp - Right Front
(11) Repeater Lamp - Right Front (TR2)
(12) Headlamp - Right
(13) Daytime Running Lamp (DRL) - Right
(14) Park Lamp - Right Front (Z75)

Forward Lighting - Lamp Harness Routing (HP2)



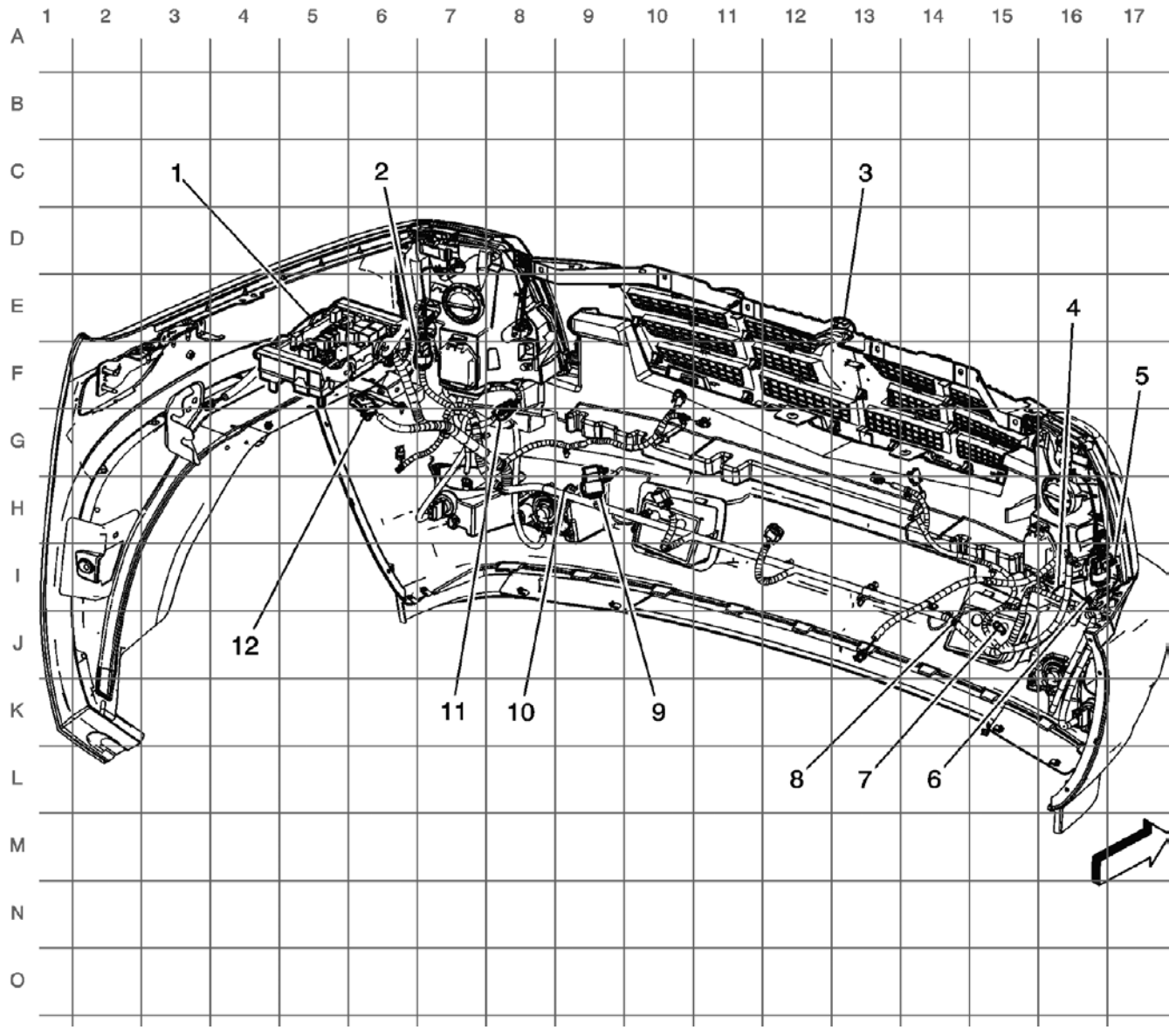
(1) Fuse Block - Underhood
(2) X100 (X88 or Z75)
(3) J160
(4) X101
(5) X106
(6) X104
(7) J101
(8) G101
(9) J162
(10) G100
(11) J161
(12) X103
(13) X105 (T96)

Forward Lighting - Lamp Harness Routing (X88)



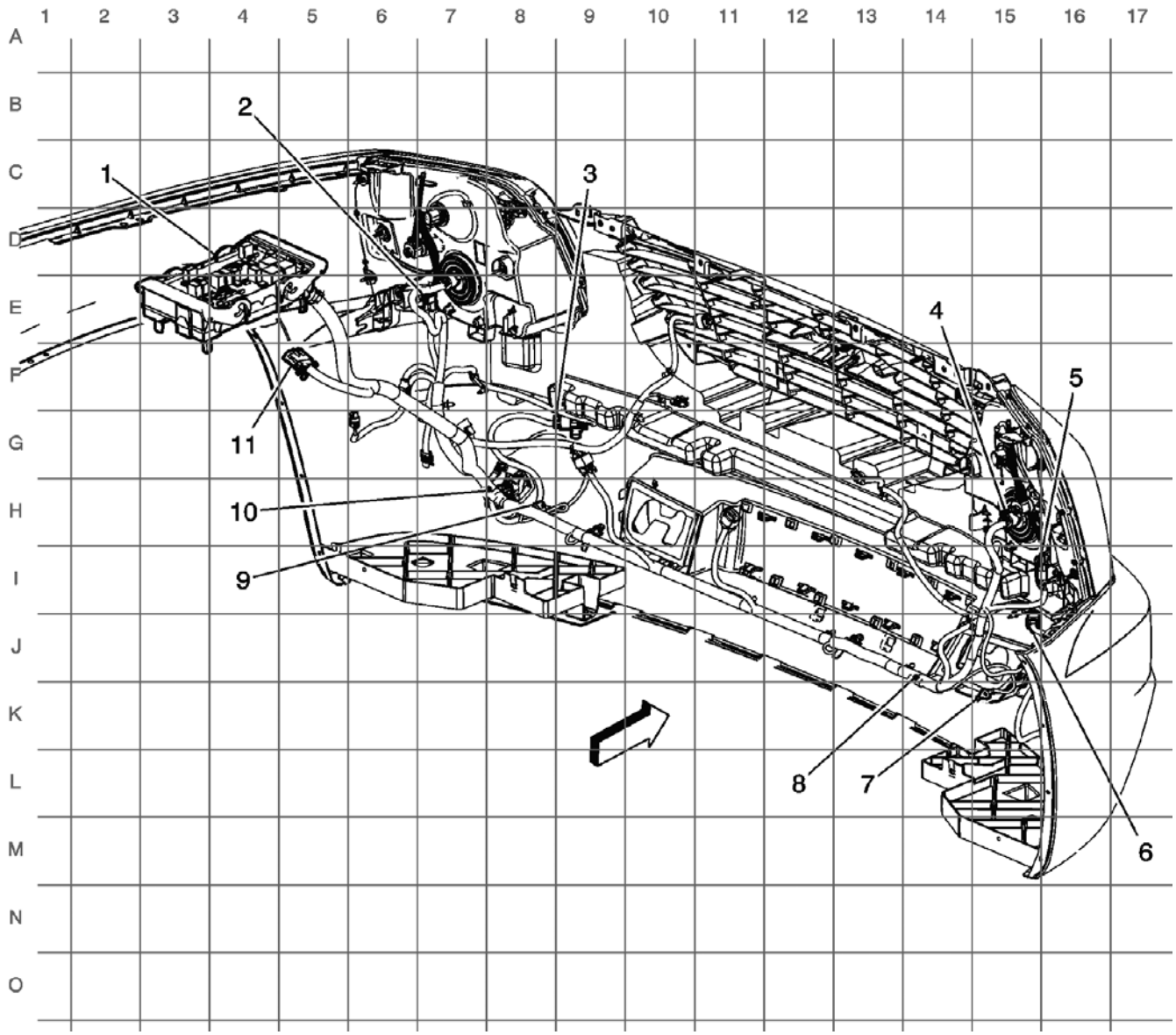
(1) Fuse Block - Underhood
(2) X100
(3) X102 (T96)
(4) X106
(5) X105 (T96)
(6) G101
(7) J101
(8) G100
(9) J100
(10) X103

Forward Lighting - Lamp Harness Routing (Z75)



(1) Fuse Block - Underhood
(2) X100 (without EXP)/X140 (EXP)
(3) Grille
(4) X104 (T96)
(5) X106 (without EXP)/X141 (EXP)
(6) J103
(7) G101
(8) J101
(9) Horn Relay (VD1)
(10) J100
(11) X101 (T96)
(12) X103

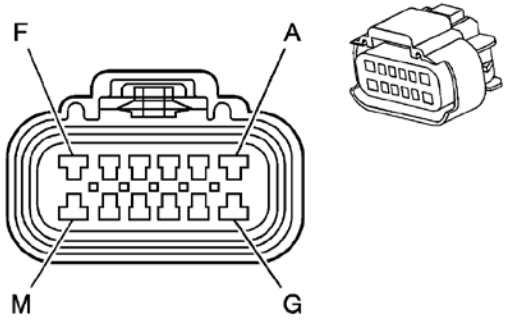
Forward Lighting - Lamp Harness Routing (Z88)

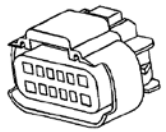


(1) Fuse Block - Underhood
(2) X107 (VYU)
(3) X101
(4) X102 (T96)
(5) X104
(6) X108 (VYU)
(7) G101
(8) J101
(9) G100
(10) J100
(11) X103

Forward Lighting - Headlamp - Left (T4Q)

Connector Part Information





Harness:
Forward Lamp

OEM Connector: 15326939

Service Connector: 88988440

Description: 12-Way F GT 150 280 Series, Sealed (BK)

Terminal Part Information

Pins: A, F, M

Terminated Lead: 13575405

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 15304719/19

Core/Insulation Crimp: 2/5

Pins: B-E, L, J

Terminated Lead: Pins B, D, E - 13575413

Terminated Lead: Pins C - 13327112

Terminated Lead: Pins L, J - 13327113

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-2A (GY)

Terminal/Tray: 12191819/8

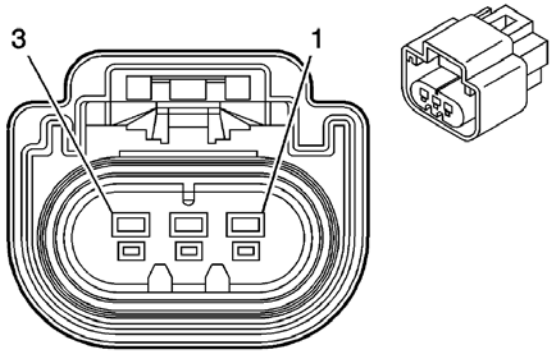
Core/Insulation Crimp: Pins B-E - E/1

Core/Insulation Crimp: Pins L, J - 2/1

Pin	Wire Color	Circuit No.	Function
A	1 YE	712	Left Headlamp Low Beam Control
B	0.5 L-GN/BK	592	DRL Low Control
C	0.35 D-BU	3204	Outage Detection Signal
D	0.5 D-BU	545	DRL Control
E	0.5 BN	2509	Left Front Park Lamp Control
F	1 BK	150	Ground
G-H	--	--	Not Used
J	1 BK	150	Ground
K	--	--	Not Used
L	0.8 D-GN/WH	711	Left Headlamp High Beam Control
M	1 BK	150	Ground

Forward Lighting - Headlamp - Left (Z88)

Connector Part Information



Harness:
Forward Lamp

OEM Connector: 13511996

Service Connector: 19149288

Description: 3-Way F GT 150 Series, Sealed (GY)

Terminal Part Information

Terminated Lead: Pins 1, 2 - 13327113

Terminated Lead: Pins 3 - 13575413

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-2A (GY)

Terminal/Tray: 12191819/8

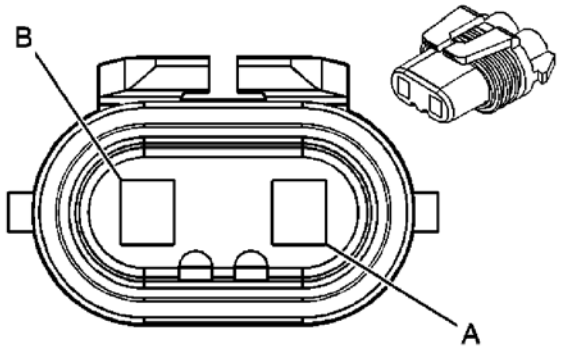
Core/Insulation Crimp: Pins 1, 2 - 2/1

Core/Insulation Crimp: Pins 3 - E/1

Pin	Wire Color	Circuit No.	Function
1	0.8 TN/WH	312	Left Headlamp Low Beam Control
2	1 BK	250	Ground (10 Series)
	0.8 BK	250	Ground (20 Series)
	0.8 BK	150	Ground (HP2)
3	0.5 L-GN/BK	311	Left Headlamp High Beam Control

Forward Lighting - Headlamp - Left High Beam (X88)

Connector Part Information



Harness:
Left Headlamp

OEM Connector: 12059183

Service Connector: 12101898

Description: 2-Way F Metri-Pack 280 Series, Sealed (BK)

Terminal Part Information

Terminal/Tray: 12077411/2

Core/Insulation Crimp: 2/5

Release Tool/Test Probe: 12094430/J-35616-4A (PU)

Pin	Wire Color	Circuit No.	Function
A	0.8 BK	150	Ground
	0.8 BK	150	Ground
B	1 D-GN/WH	711	Left Headlamp High Beam Control

Forward Lighting - Headlamp - Left Low Beam (X88)

Connector Part Information

Harness:
Left Headlamp

OEM Connector: 12124819

Service Connector: 12085498

Description: 2-Way F Metri-Pack 280 Series, Sealed (BK)

Terminal Part Information

Terminal/Tray: Service by Harness - See Part Catalog

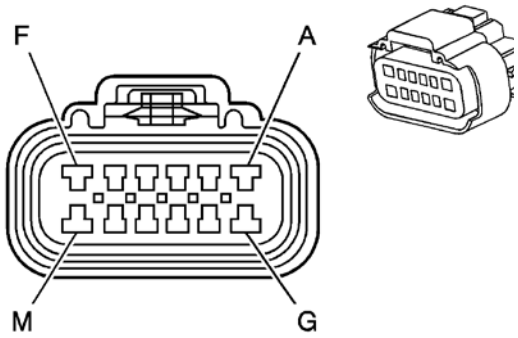
Core/Insulation Crimp: Not Available

Release Tool/Test Probe: Not Available

Pin	Wire Color	Circuit No.	Function
A	0.8 BK	150	Ground
B	1 YE	712	Left Headlamp Low Beam Control

Forward Lighting - Headlamp - Right (T4Q)

Connector Part Information



Harness:
Forward Lamp

OEM Connector: 15326939

Service Connector: 88988440

Description: 12-Way F GT 150 280 Series, Sealed (BK)

Terminal Part Information

Pins: A, F, M, J

Terminated Lead: 13575405

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 15304719/19

Core/Insulation Crimp: 2/5

Pins: B-E, L

Terminated Lead: Pins B, D, E - 13575413

Terminated Lead: Pins C - 13327112

Terminated Lead: Pins L - 13327113

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-2A (GY)

Terminal/Tray: 12191819/8

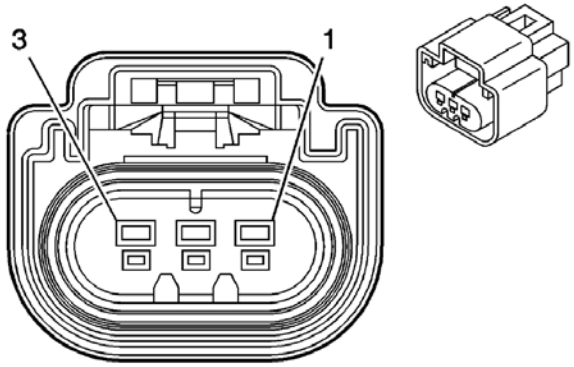
Core/Insulation Crimp: Pins B-E - E/1

Core/Insulation Crimp: Pins L - 2/1

Pin	Wire Color	Circuit No.	Function
A	1 TN/WH	312	Right Headlamp Low Beam Control
B	0.5 L-GN/BK	592	DRL Low Control
C	0.35 L-BU	3203	Outage Detection Signal
D	0.5 D-BU	545	DRL Control
E	0.5 BN	2609	Right Front Park Lamp Control
F	1 BK	250	Ground
G-H	--	--	Not Used
J	1 BK	250	Ground
K	--	--	Not Used
L	0.8 L-GN/BK	311	Right Headlamp High Beam Control
M	1 BK	250	Ground

Forward Lighting - Headlamp - Right (Z88)

Connector Part Information



Harness:
Forward Lamp

OEM Connector: 13511996

Service Connector: 19149288

Description: 3-Way F GT 150 Series Sealed (GY)

Terminal Part Information

Terminated Lead: Pins 1, 2 - 13327113

Terminated Lead: Pins 3 - 13575413

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-2A (GY)

Terminal/Tray: 12191819/8

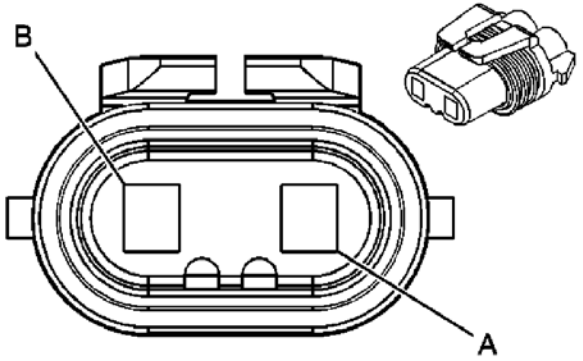
Core/Insulation Crimp: Pins 1, 2 - 2/1

Core/Insulation Crimp: Pins 3 - E/1

Pin	Wire Color	Circuit No.	Function
1	0.8 TN/WH	312	Right Headlamp Low Beam Control
2	0.8 BK	250	Ground (20 Series)
	0.8 BK	150	Ground (10 Series)
3	0.5 L-GN/BK	311	Right Headlamp High Beam Control

Forward Lighting - Headlamp - Right High Beam (X88)

Connector Part Information



Harness:
Right Headlamp

OEM Connector: 12059183

Service Connector: 12101898

Description: 2-Way F Metri-Pack 280 Series, Sealed (BK)

Terminal Part Information

Terminal/Tray: 12077411/2

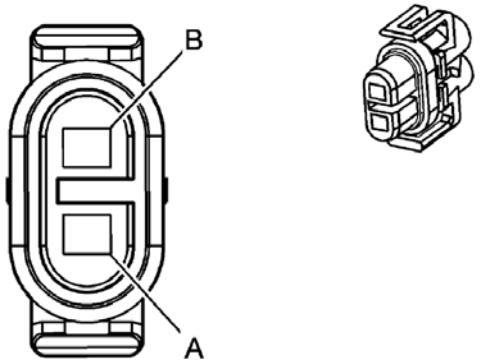
Core/Insulation Crimp: 2/5

Release Tool/Test Probe: 12094430/J-35616-4A (PU)

Pin	Wire Color	Circuit No.	Function
A	0.8 BK	150	Ground
	0.8 BK	150	Ground
B	1 D-GN/WH	311	Right Headlamp High Beam Control

Forward Lighting - Headlamp - Right Low Beam (X88)

Connector Part Information



Harness:
Right Headlamp

OEM Connector: 12124819

Service Connector: 12085498

Description: 2-Way F Metri-Pack 280 Series, Sealed (BK)

Terminal Part Information

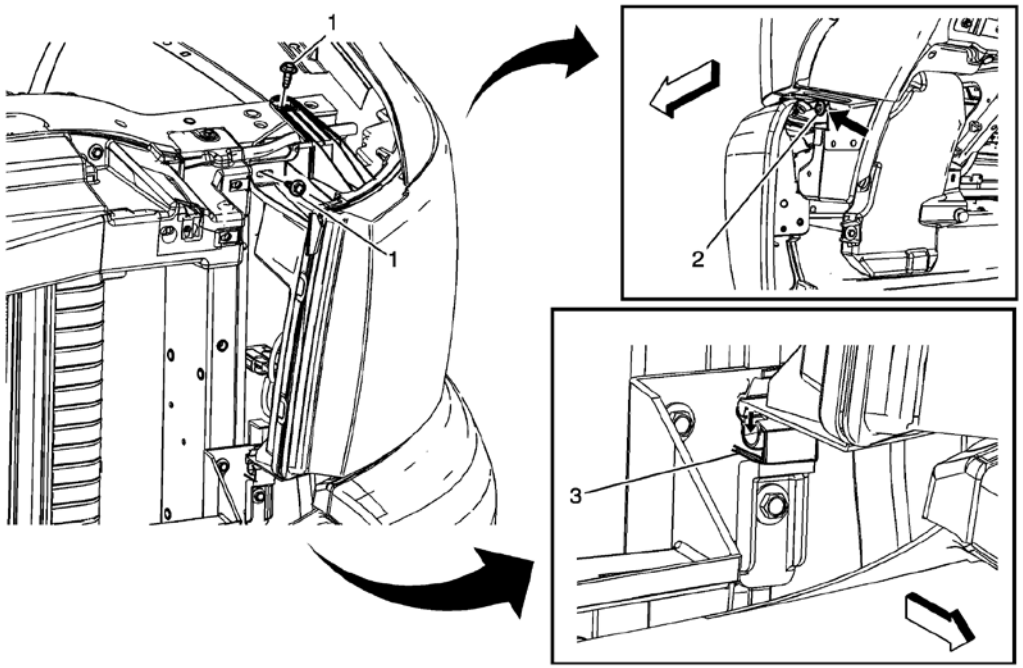
Terminal/Tray: Service by Harness - See Part Catalog

Core/Insulation Crimp: Not Available

Release Tool/Test Probe: Not Available

Pin	Wire Color	Circuit No.	Function
A	0.8 BK	150	Ground
B	1 YE	312	Right Headlamp Low Beam Control

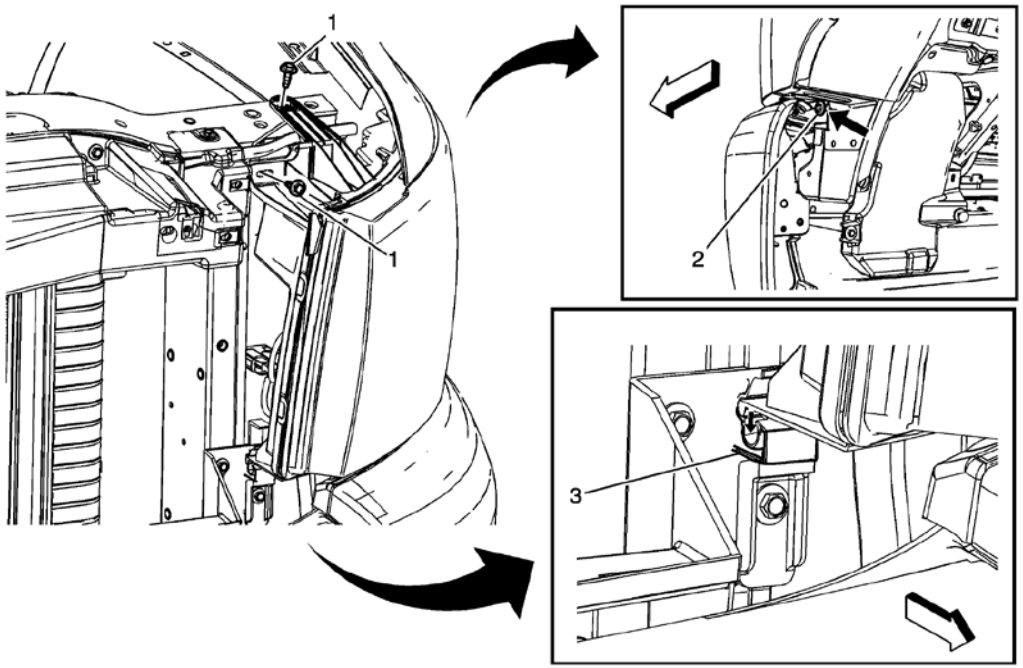
Forward Lighting - Headlamp Replacement (Chevrolet)



Preliminary Procedure
1. Remove the upper radiator grille. Refer to Radiator Grille Replacement. 2. Behind the headlamp at the top of the front bumper access the lower inside hidden headlamp bolt. 3. Loosen the bolt only, do not remove, the lower outside hidden headlamp bolt .

Callout	Component Name/Procedure
1	Headlamp Screws (Qty: 2) Caution: Refer to Fastener Caution in the Preface section. **Tighten:** 6 N·m (53 lb in)
2	Headlamp Screw (Hidden) **Tighten:** 6 N·m (53 lb in)
3	Headlamp Housing Support **Procedure:** 1. Apply masking tape to the front bumper end caps to protect the painted surface. 2. For the right side lamp assembly only, disengage the upper retainer for the radiator air baffle. 3. Release the headlamp from the support tab, rotate the lamp assembly towards the center of the vehicle. 4. Disengage the headlamp electrical connector from the forward lamp harness.

Forward Lighting - Headlamp Replacement (GMC)

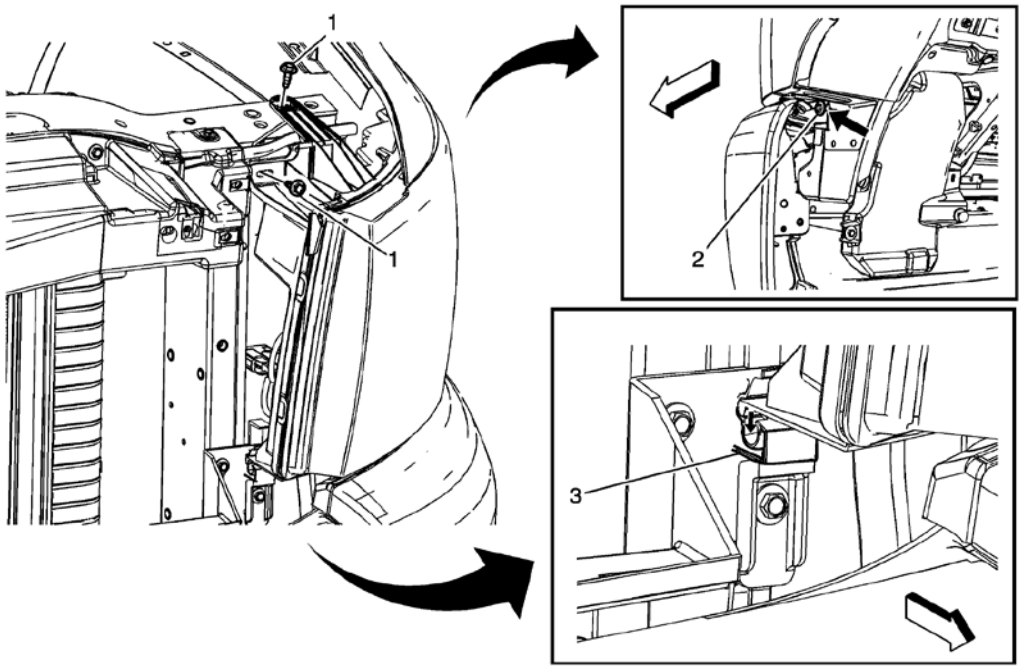


Preliminary Procedure

1. Remove either the right front or left front wheelhouse liner. Refer to Front Wheelhouse Liner Replacement - Right Side or Front Wheelhouse Liner Replacement - Left Side.
2. Loosen only, do not remove, the lower outside hidden headlamp bolt (2).
3. Depress the housing support tab with a flat-bladed tool downward in order to release the headlamp assembly from the support.
4. Pull the lamp assembly slightly forward to access the electrical connection.
5. Disconnect the forward lamp harness main electrical connector from the headlamp harness.

Callout	Component Name/Procedure
1	Headlamp Screws (Qty: 2) Caution: Refer to Fastener Caution in the Preface section. **Tighten:** 6 N·m (53 lb in)
2	Headlamp Screw (Hidden) **Tighten:** 6 N·m (53 lb in)
3	Headlamp Housing Support

Forward Lighting - Headlamp Replacement (HD Diesel)

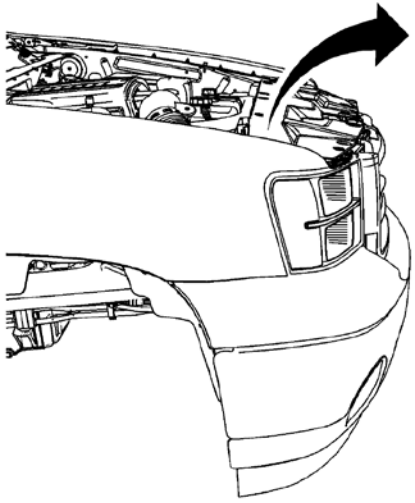


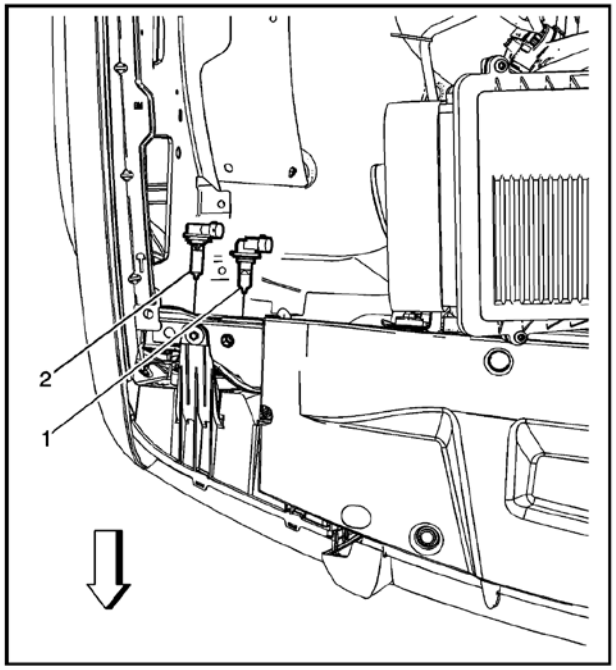
Preliminary Procedure

1. Lower the front bumper impact bar. Refer to Front Bumper Impact Bar Replacement.
2. Loosen only, do not remove, the lower outside hidden headlamp bolt (2).
3. Depress the housing support tab with a flat-bladed tool downward in order to release the headlamp assembly from the support.
4. Pull the lamp assembly slightly forward to access the electrical connection.
5. Disconnect the forward lamp harness main electrical connector from the headlamp harness.

Callout	Component Name/Procedure
1	Headlamp Screws (Qty: 2) Caution: Refer to Fastener Caution in the Preface section. **Tighten:** 6 N·m (53 lb in)
2	Headlamp Screw (Hidden) **Tighten:** 6 N·m (53 lb in)
3	Headlamp Housing Support

Forward Lighting - Headlamp Bulb Replacement (Chevrolet)

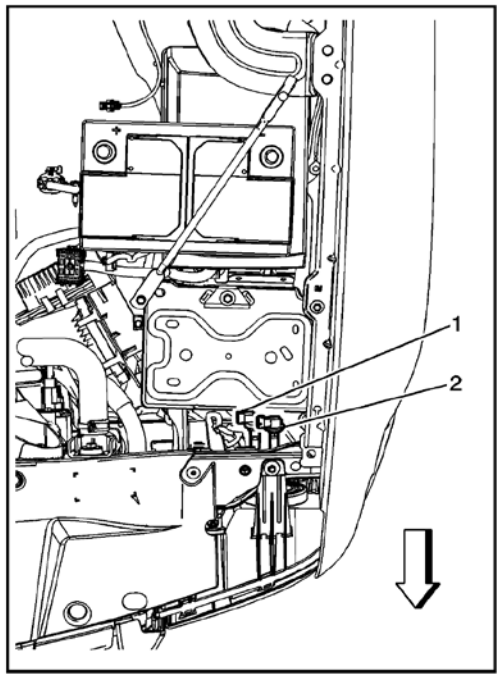


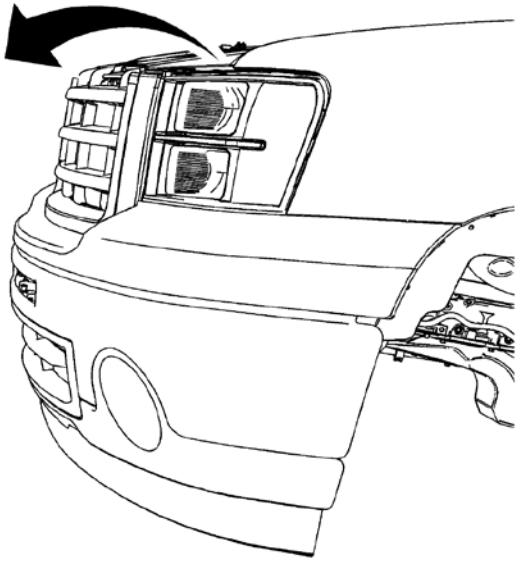


Preliminary Procedure
1. Open and support the hood assembly. 2. If replacing the headlamp bulbs on the passenger side, remove the air cleaner box assembly. Refer to Air Cleaner Assembly Replacement. 3. If replacing the headlamp bulbs on the driver side, remove the auxiliary battery, (if equipped). Refer to Auxiliary Battery Replacement. 4. If no auxiliary battery is used, just reach in and access the bulb sockets from inside the engine compartment, disconnect the headlamp bulb electrical connector. 5. Rotate the bulb socket counter-clockwise and remove from the headlamp composite.

Callout	Component Name/Procedure
1	Headlamp Bulb (Hi) Warning: Refer to Halogen Bulb Warning in the Preface section. **Tip:** Disconnect the headlamp bulb electrical connector from the headlamp bulb socket assembly.
2	Headlamp Bulb (Lo) **Tip:** Disconnect the headlamp bulb electrical connector from the headlamp bulb socket assembly.

Forward Lighting - Headlamp Bulb Replacement (GMC)





Preliminary Procedure
1. Open and support the hood assembly. 2. If replacing the headlamp bulbs on the passenger side, remove the air cleaner box assembly. Refer to Air Cleaner Assembly Replacement. 3. If replacing the headlamp bulbs on the driver side, remove the auxiliary battery, (if equipped). Refer to Auxiliary Battery Replacement. 4. If no auxiliary battery is used, just reach in and access the bulb sockets from inside the engine compartment, disconnect the headlamp bulb electrical connector. 5. Rotate the bulb socket counter-clockwise and remove from the headlamp composite.

Callout	Component Name/Procedure
1	Headlamp Bulb (Hi) Warning: Refer to Halogen Bulb Warning in the Preface section. **Tip:** Disconnect the headlamp bulb electrical connector from the headlamp bulb socket assembly.
2	Headlamp Bulb (Lo) **Tip:** Disconnect the headlamp bulb electrical connector from the headlamp bulb socket assembly.

Bulb Replacement

Replacement Bulbs Chevrolet Silverado	
Exterior Lamp	**Bulb Number**
Back-up Lamp	921LL
Back-up Lamp*	1156
Cargo Lamp and Center High-Mounted Stoplamp (CHMSL)	912LL
Fender Marker Lamp (If Equipped)	W5WLL
High-Beam Headlamp	9005
Low-Beam Headlamp	H11
License Plate Lamp	168
Sidemarker Lamp/Stoplamp/Taillamp/Turn Signal Lamp	3047K
Stoplamp/Turn Signal Lamp/Taillamp*	1157
* Chassis Cab Models	

Replacement Bulbs GMC Sierra	
Exterior Lamp	**Bulb Number**
Back-up Lamp	921
Back-up Lamp*	1156
Cargo Lamp and Center High-Mounted Stoplamp (CHMSL)	912
Fender Marker	W5WLL
High-Beam Headlamp	9005
Low-Beam Headlamp	H11
License Plate Lamp	168
Stoplamp/Taillamp/Turn Signal Lamp	3047K
Sidemarker Lamp	194
Stoplamp/Turn Signal Lamp/Taillamp*	1157
* Chassis Cab Models	

Replacement Bulbs Chevrolet Tahoe/Suburban	
If the vehicle is a hybrid, see the hybrid supplement for more information.	
Exterior Lamp	**Bulb Number**
Back-up Lamp	7441
License Plate Lamp	W5WLL
Rear Turn Signal Lamp, Taillamp, and Stoplamp	3057K
Side Marker Lamp	194

Replacement Bulbs Yukon	
If the vehicle is a hybrid, see the hybrid supplement for more information.	
Exterior Lamp	**Bulb Number**
Back-up Lamp	7441
License Plate Lamp	W5WLL
Rear Turn Signal Lamp, Taillamp, and Stoplamp	7443

For replacement bulbs not listed here, contact your dealer.

Rearward Lighting - Separate Stop and Turn Signals

1. Before you start, disconnect the rear chassis lighting connector and select L or R turn signal with the key on. If it fast flashes you will need to assure your BCM is programmed for ZW9 LED compatible rear lamps so the removal of the rear circuit loads will not result in fast flashing. See UI Bulletin 81. If you don't want to reprogram you will need to use ballast resistors in place of the rear turn/stop lamps and run new wires for left, right and stop rear lights.
2. Locate the orange blunt cut wire under the LH dash panel [see: BBM Installing Electric Trailer Brake Controller Wiring.] See the Stop Signal Controls and CHMSL Schematic on the following page.
3. For the LH rear turn signal, cut the Yellow 18 circuit in the BCM connector X5 cavity 1 and splice the harness lead to the light blue white 1314 circuit in the BCM connector X5 cavity 4. See attached schematics Turn Signal Controls and Front Turn Lamp, and Rear Stop Turn Signal Lamps, for details.
4. For the RH rear turn signal, cut the Dark Green 19 circuit in the BCM connector X5 cavity 2 and splice the harness lead to the dark blue white 1315 circuit in the BCM connector X4 cavity 5.
5. The current limit is 6A. If your lamps require more current you must use a relay energized by the front turn signal circuits and switch battery power directly to the rear lamps.

(continued on next page)

Rearward Lighting - Separate Stop and Turn Signals (cont'd)

Turn Signal Controls and Front Turn Lamp

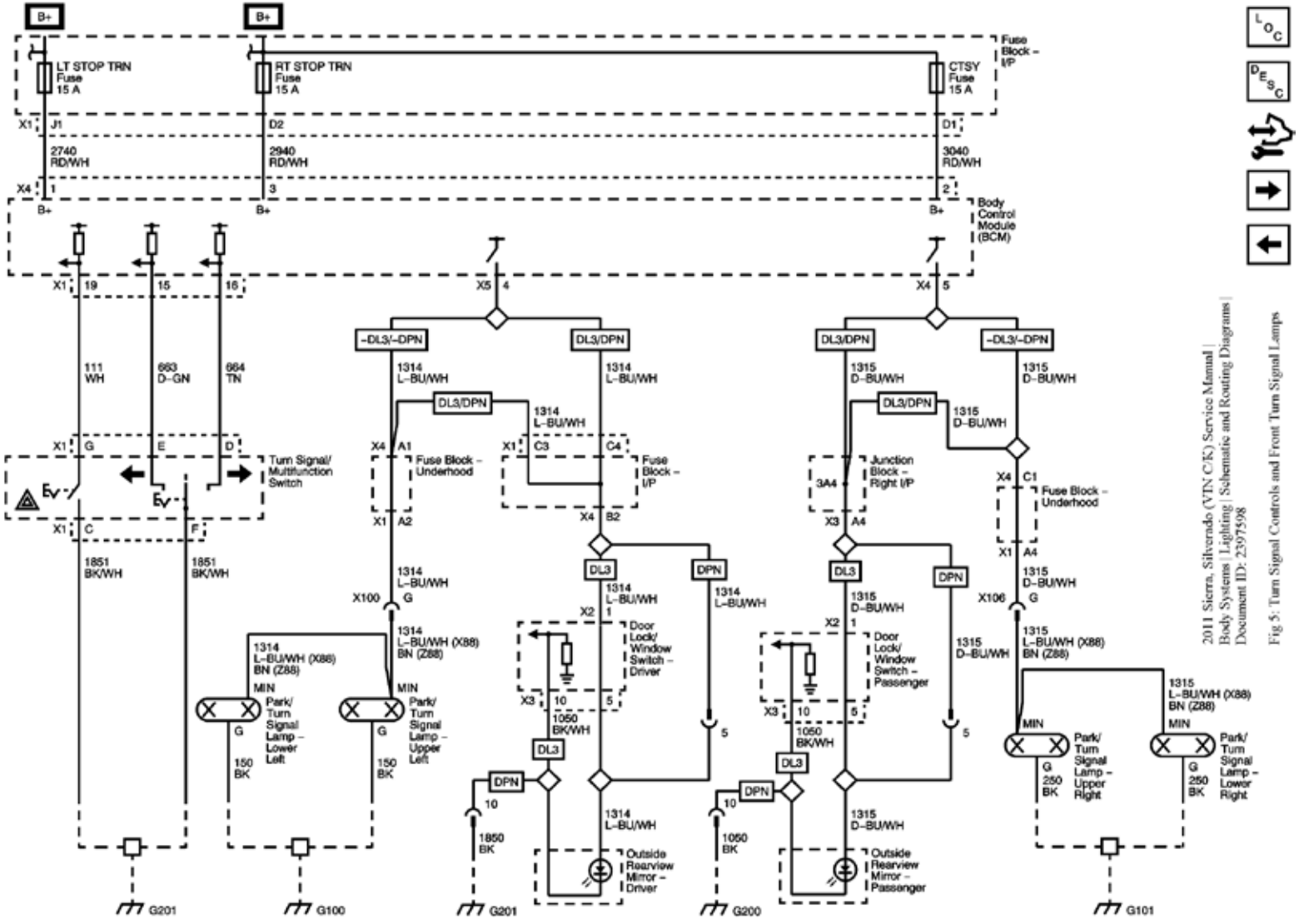


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Fig. 5: Turn Signal Controls and Front Turn Signal Lamps

(continued on next page)

Rearward Lighting - Separate Stop and Turn Signals (cont'd)

Rear Stop Turn Signal Lamps Schematic

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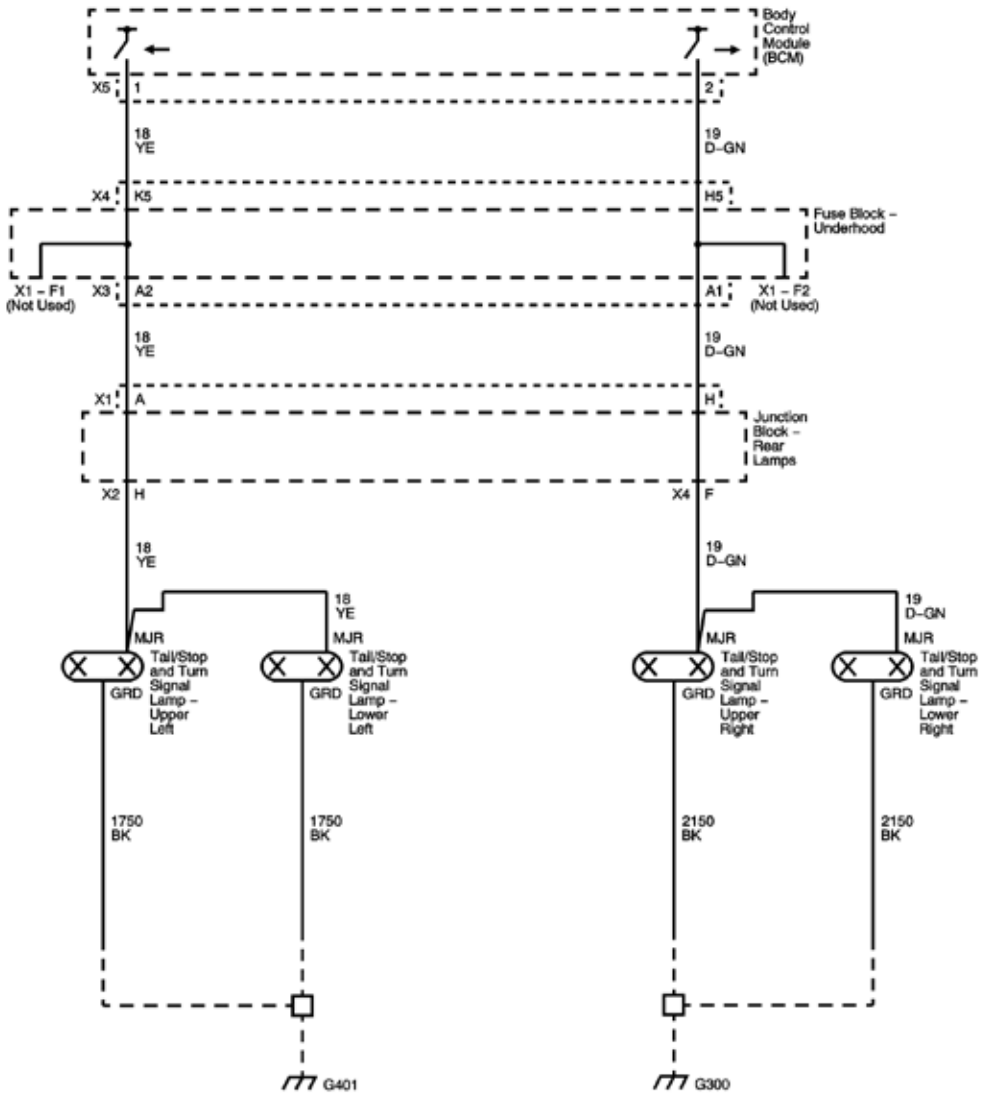
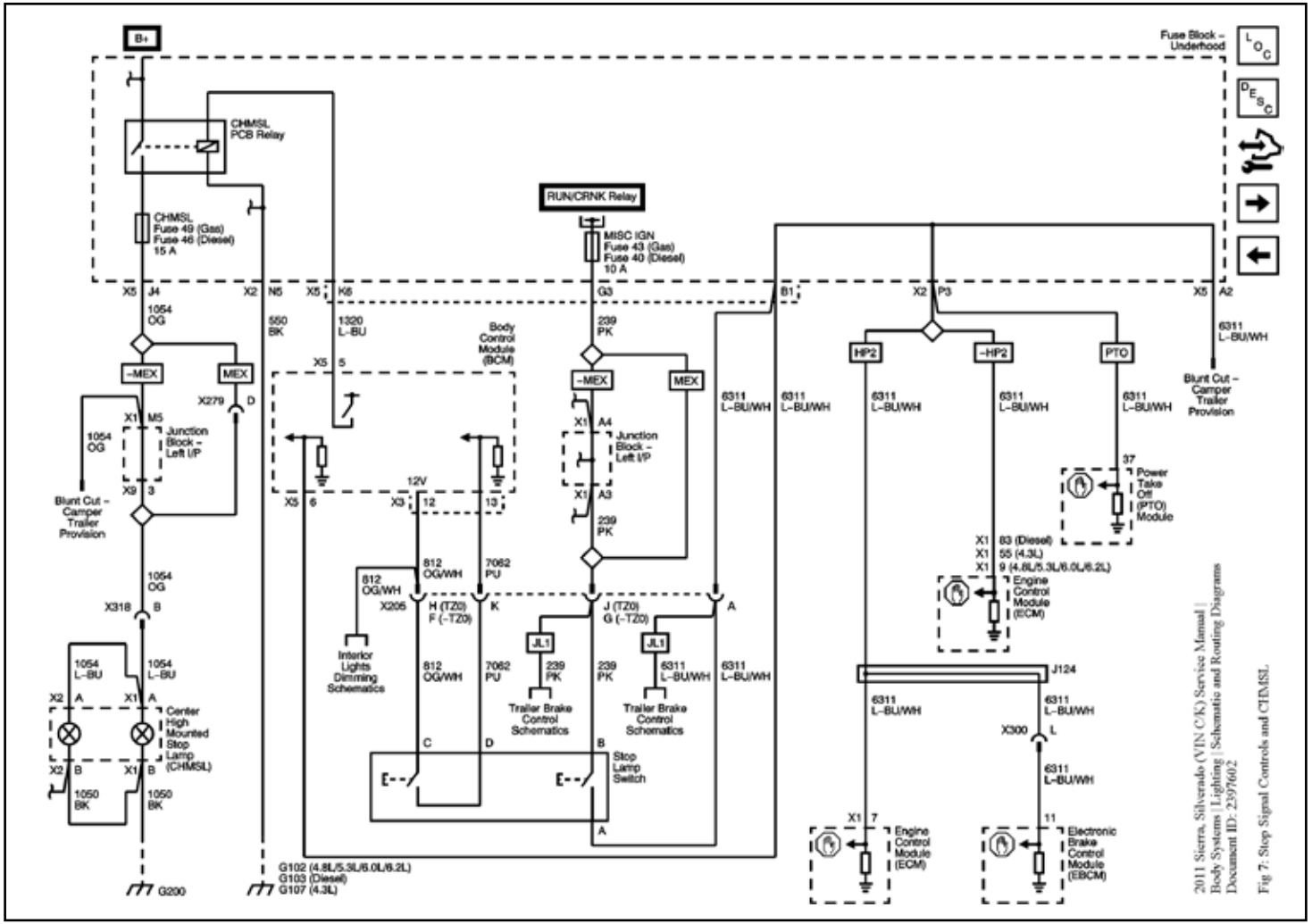
Fig 6: Rear Stop/Turn Signal Lamps



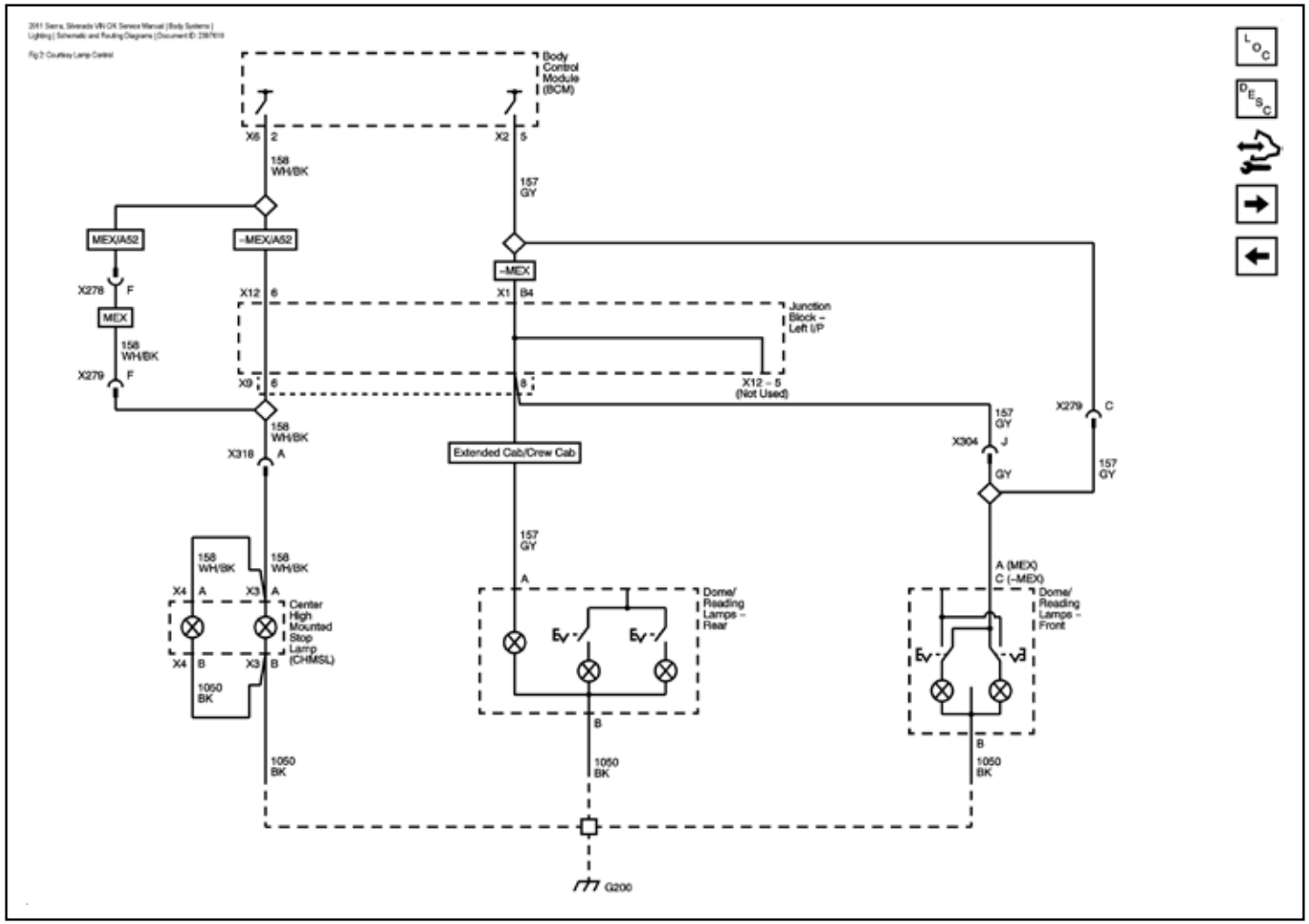
Rearward Lighting - CHMSL

Locate the orange blunt cut wire under the LH dash panel [see: BBM Installing Electric Trailer Brake Controller Wiring.] See the Stop Signal Controls and CHMSL Schematic below.


B+
Fuse Block – Underhood
CHMSL PCB Relay
CHMSL Fuse 49 (Gas) Fuse 46 (Diesel) 15 A
RUN/CRNK Relay
MISC IGN Fuse 43 (Gas) Fuse 40 (Diesel) 10 A
Body Control Module (BCM)
Junction Block – Left I/P
Blunt Cut – Camper Trailer Provision
Center High Mounted Stop Lamp (CHMSL)
Interior Lights Dimming Schematics
Trailer Brake Control Schematics
Stop Lamp Switch
Power Take Off (PTO) Module
Engine Control Module (ECM)
Electronic Brake Control Module (EBCM)
G102 (4.8L/5.3L/6.0L/6.2L)
G103 (Diesel)
G107 (4.3L)
G200
2011 Sierra, Silverado (VIN C/K) Service Manual | Body Systems | Lighting | Schematic and Routing Diagrams
Document ID: 2597602
Fig 7: Stop Signal Controls and CHMSL

Dome Lamp

A control signal for additional dome lamps (courtesy lamps) can be accessed junction block left IP X12 cavity 5 see electrical center identification views. A pin can be added to this connector to pick up the signal. See the Courtesy Lamp Control Schematic.



Snow Plow Prep Package (VYU) Electrical Provisions

Emergency Roof-Mounted Lamp Switch
This provision includes an over head console mounted switch , a relay, and wiring which terminates at the roof as coiled blunt cut wires – Option TRW. There are two blunt cut 12-gauge (3.0 mm2) wires, one is Dark Green (roof-mounted lamp power), it is controlled by the over head console -mounted switch through the relay, the other is Black (ground). The Dark Green power wire is protected by the 30-Amp S/ROOF fuse #33 which is located in the Underhood Electrical Center.

VYU Generators
- On 1500/2500 Series trucks equipped with Gas Engines, the VYU option provides upgrade to a larger 160 amp output generator
- On 2500/3500 Series trucks equipped with Diesel Engines, the VYU option provides upgrade to dual 125 amp generators
- Refer to the Generator Chart on page A-18

Accessory Harness Grommet
Trucks will come equipped with a predrilled 42mm pass-through hole located on the dash panel on the left hand side of the vehicle. The hole will be sealed with a grommet (see Figure 3) which can be used by the upfitter for pass-through wiring. To use the grommet (part# 15336702), the upfitter slices off the tape tab end (in engine compartment) of the grommet and then spreads it open to pass wiring through.

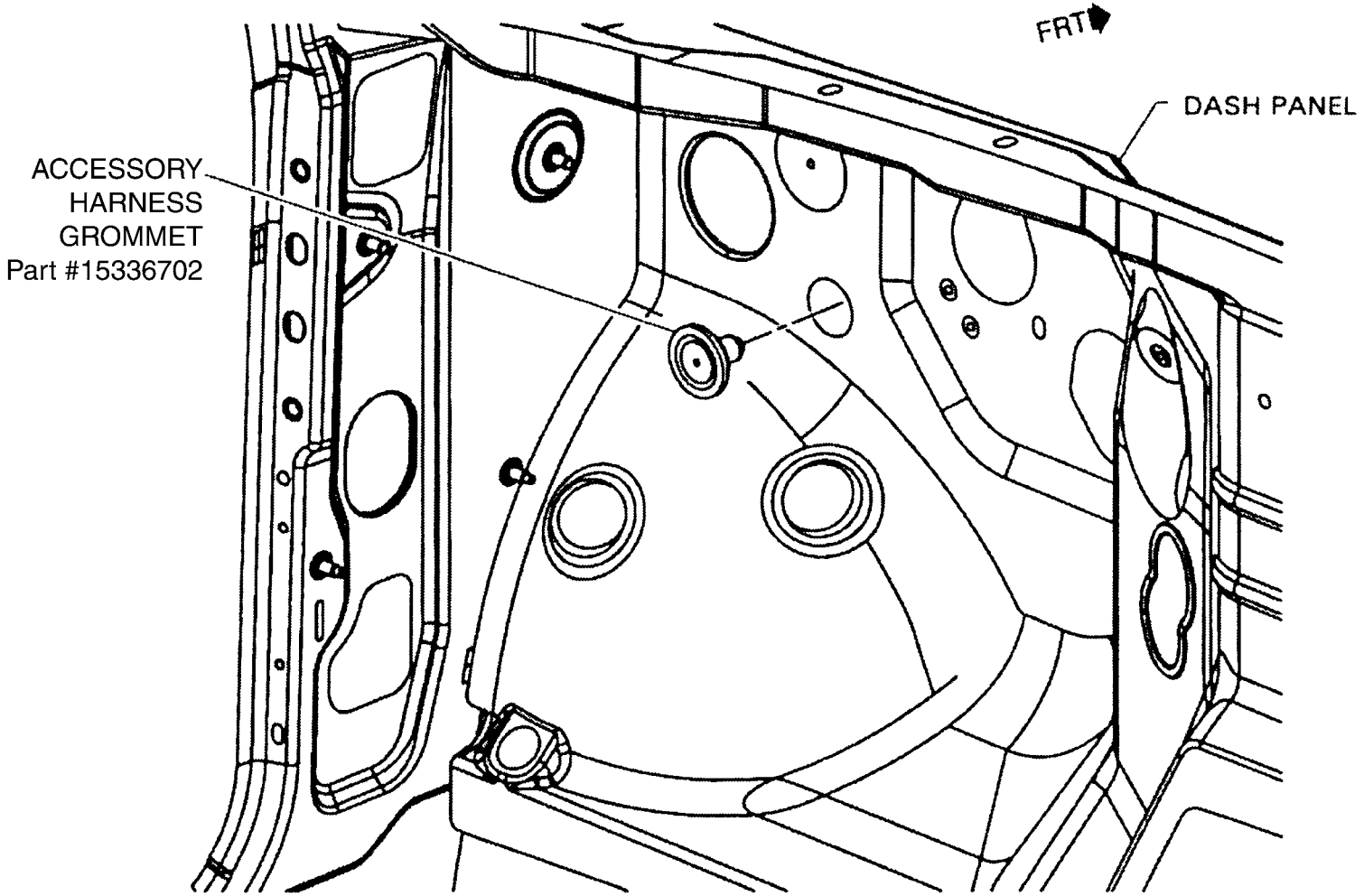
Forward Lamp Harness In-Line Connectors
The turn signals are driven from the BCM. Changes in turn signal current may require the use of additional relays. The Studs on the UBEC can be used for battery power for the relays. This wire requires a separate in-line fuse.

The Chevrolet (X88) and GMC (Z88) utilities have different forward lamps.
- Chevrolet forward lamp wiring harness will have a set of mating eight cavity connectors on both the left and right hand side of the vehicle The upfitter will be able to disconnect the in-line connectors which will allow interfacing with the forward lamp circuits (Front Parklamp, Turn Signal and DRL). The headlamp circuits may be accessed from the headlamp connectors.
- GMC lamp wiring harness will have a set of mating 3 cavity connectors on both the left and right hand side of the vehicle for Turn Signal and Park Lamps. High and Low beams do not have an in-line connector. The VYU options adds an additional set of mating 3 cavity connectors on both the left and right hand side of the vehicle for High and Low beams.

The Chevrolet (X88) and GMC (Z88) pickups have the same forward lamps.
- These are similar to the Chevrolet utility. The difference is the utilities have a separate Daytime Running Lamp (DRL). The Pickups use a reduced intensity Low Beam Headlamp for DRL. Both the pickups and the Chevrolet utility use the same eight cavity connectors for the forward lamp wiring. The difference is the pickups have no connection for the DRL.

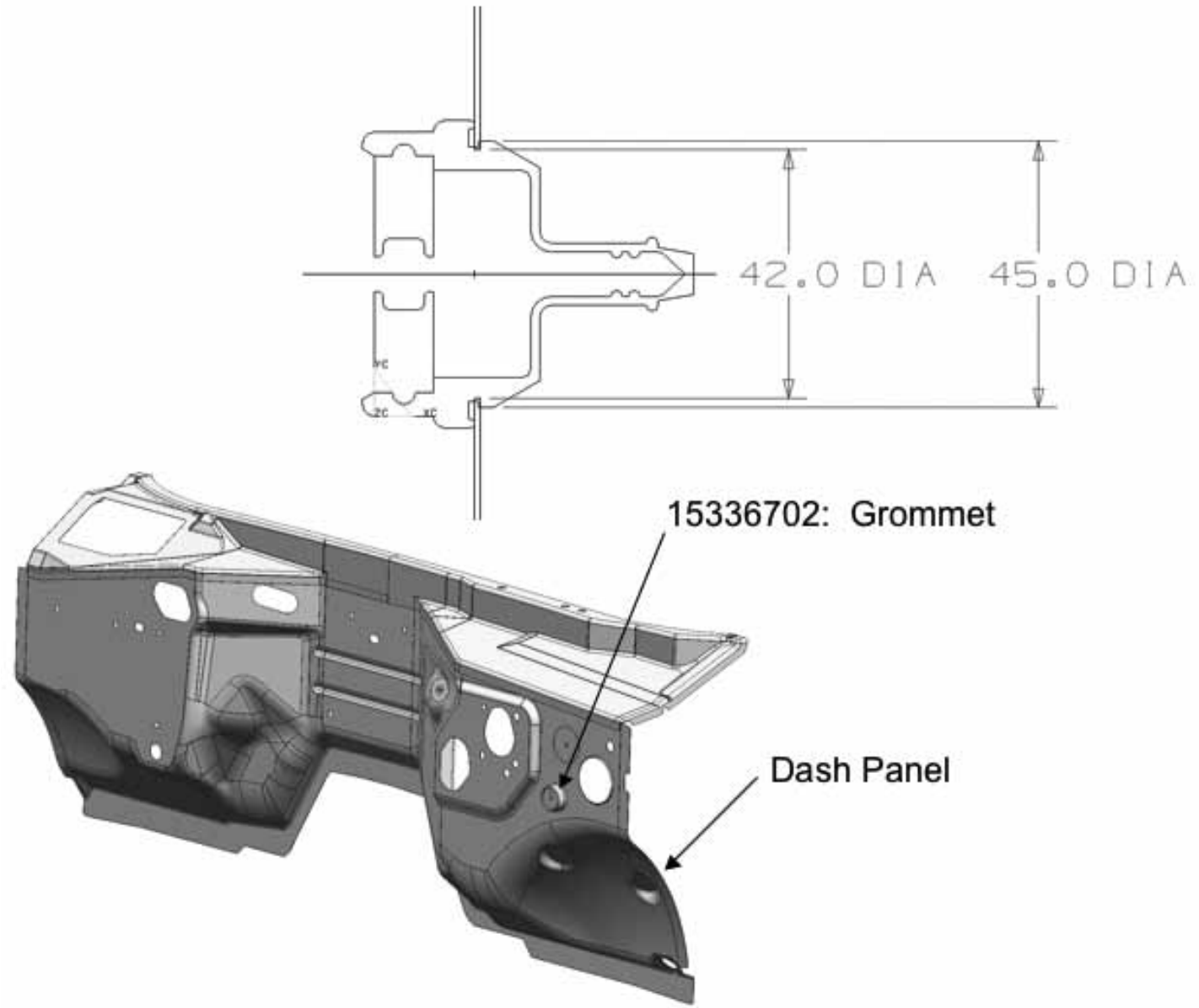
Backup Lamp Power Feed
A backup lamp power feed is provided at the rear of the vehicle through the trailer wiring harness as a standard feature. This circuit is protected by the 10-Amp TRLR B/U fuse which is located in the Under hood Electrical Center. On vehicles with Light Duty Trailer Wiring this circuit can be accessed through the Light Green trailer wire. This wire is located in pin A of the trailer connector at the rear of the vehicle (see figure 6). On vehicles with Heavy Duty Trailer Wiring option, this connector is mated with a socket at the rear of the vehicle (see figure 7).

AcCessory Harness Grommet



ACCESSORY HARNESS GROMMET

VYU Hole Location



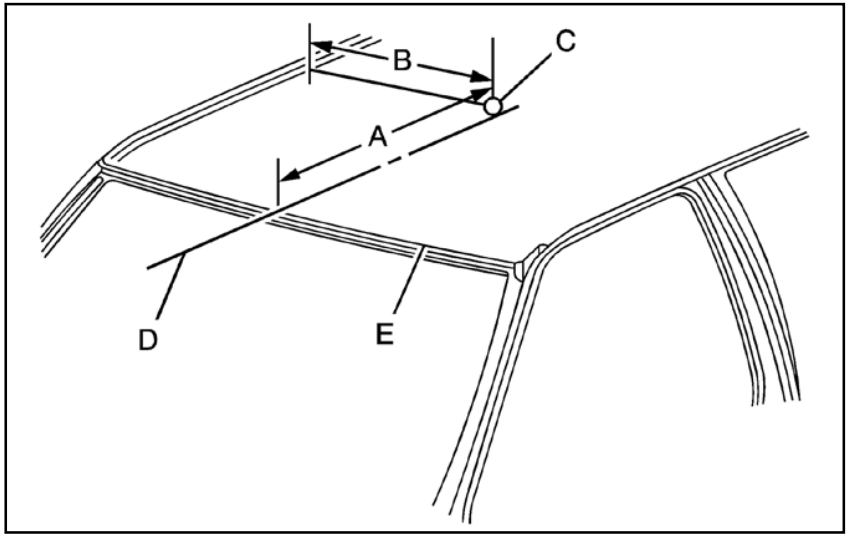
Roof Mounted Beacon (TRW)

Battery power is supplied through the sunroof 30 amp fuse to a wiring harness located in the roof. Power is controlled with a switch located in the overhead console. The customer or vehicle upfitter must complete the installation by first connecting the switch (switch not connected at the factory) and routing the blunt cut wires out to an added accessory such as an emergency beacon lamp.

Maximum rated electrical load is 21 amps (250 watts). The added electrical requirements must not exceed 21 amps (250 watts). Running the accessory for long periods of time with the engine off may run the battery down.

Installation Instructions — Emergency Vehicle Roof Panel Lamp

Wiring to the accessory can be done by either directly connecting the wire in the roof to the accessory (Option A) or by using Wiring Harness Package part number 12150250 obtained from GM Service Parts (Option B).



A. 25.39 inches (645 mm)
B. 17.32 inches (440 mm)
C. 3.94 inches (100 mm)
D. Roof Centerline
E. Roof Edge

(continued on next page)

Roof Mounted Beacon (TRW) (cont'd)

Emergency Vehicle Roof Panel Lamp
(continued from previous page)

1. Remove sunroof 30A fuse.
2. Make the electrical connections using either option A or option B.

Notice: Pulling the wiring harness through a panel hole that has sharp edges may cause damage to the wire and/or wire insulation. Remove sharp edges from the panel hole before pulling the wire through it.

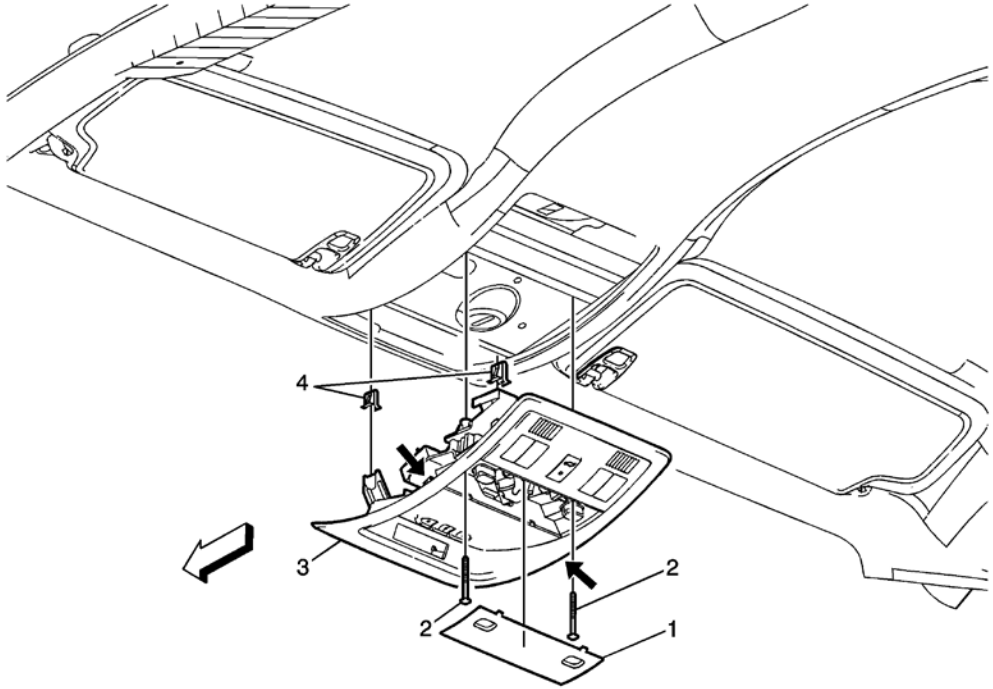
Option A: Roof Wires Directly to Accessory

1. Remove the overhead console (see procedure).
2. Drill a 3/8 inch to 1/2 inch (10 to 13 mm) hole in the outer roof panel in the area shown in the illustration. The hole should only go through the outer panel. Remove all sharp edges from the drilled hole.
3. The accessory harness is coil tied to the passenger's side of the vehicle at the console inner bracket.
4. Cut the tape holding the harness coil.
5. As one person watches the roof hole from the outside for the end of the harness, a second person from the inside of the vehicle should snake the harness toward the hole.
6. Pull out the wiring harness being careful to avoid scraping the insulation on the edge of the hole.
7. Extend the wiring harness to the accessory.
8. Connect the dark green wire to the accessory hot terminal.
9. Connect the black wire to the accessory ground terminal.
10. Cover the hole in the roof with durable sealant such as silicone rubber sealer.
11. Install the harness connector to the Roof Beacon switch (not connected at the factory to prevent accidental battery run down).
12. Reinstall the overhead console access panel/lamp lenses.

Option B: Use Wiring Harness Package 12150250.
Obtain from GM Service Parts through the GM Dealership

1. Remove the overhead console (see procedure).
2. Drill a 1.25 inch (32 mm) hole in the outer roof panel in the area shown in the illustration. The hole should only go through the outer panel. Remove all sharp edges from the drilled hole.
3. The accessory harness is coil tied to the passenger's side of the vehicle at the console inner bracket.
4. Cut the tape holding the harness coil.
5. As one person watches the roof hole from the outside for the end of the harness, a second person from the inside of the vehicle should snake the harness toward the hole.
6. Pull out the wiring harness being careful to avoid scraping the insulation on the edge of the hole.
7. Cut the wire to length. Install terminals to wire ends and insert into the connector. The brown wire goes to cavity A and the black wire in cavity B. Push in the secondary lock to retain the wires.
8. Attach the harness assembly from the package to the accessory. Cover with the supplied conduit for added protection. Connect the orange wire to the accessory hot terminal and the black wire to the ground.
9. Complete the connection from the roof harness to the extension harness. Cover the mated connector with the supplied foam. Push the foam covered connection and excess wire through the roof panel hole.
10. Install the harness connector to the Roof Beacon switch (not connected at the factory to prevent accidental battery run down).
11. Reinstall the overhead console access panel/lamp lenses.

Roof Console Replacement



(1) Roof Console Dome and Reading Lamp Lens

(2) Roof Console Screw (Qty: 2)

Caution: Use the correct fastener in the correct location. Replacement fasteners must be the correct part number for that application. Do not use paints, lubricants, or corrosion inhibitors on fasteners, or fastener joint surfaces, unless specified. These coatings affect fastener torque and joint clamping force and may damage the fastener. Use the correct tightening sequence and specifications when installing fasteners in order to avoid damage to parts and systems. When using fasteners that are threaded directly into plastic, use extreme care not to strip the mating plastic part(s). Use hand tools only, and do not use any kind of impact or power tools. Fastener should be hand tightened, fully seated, and not stripped.

Tighten 2 N·m (18 lb in)

(3) Roof Console Assembly

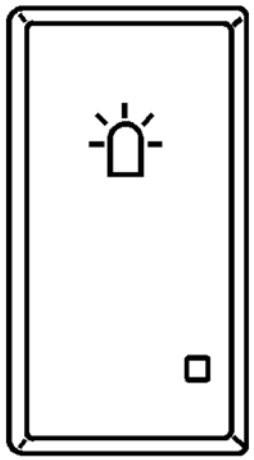
Caution: Do not exert downward force at the forward or rearward edge of the roof console assembly as irreversible damage will occur.

Procedures

1. Grasp the right and left sides of the roof console assembly where indicated with arrows and pull downward using equal force on each side in order to release the retainer clips securing the overhead console assembly to the headlining assembly.
2. Disconnect the electrical connectors.
3. If replacing roof console assembly, transfer all necessary components.

(4) Roof Console Retainers (Qty: 2)

Roof Mounted Beacon (TRW) – Restoring Power



The Roof Beacon switch is located on the overhead console.

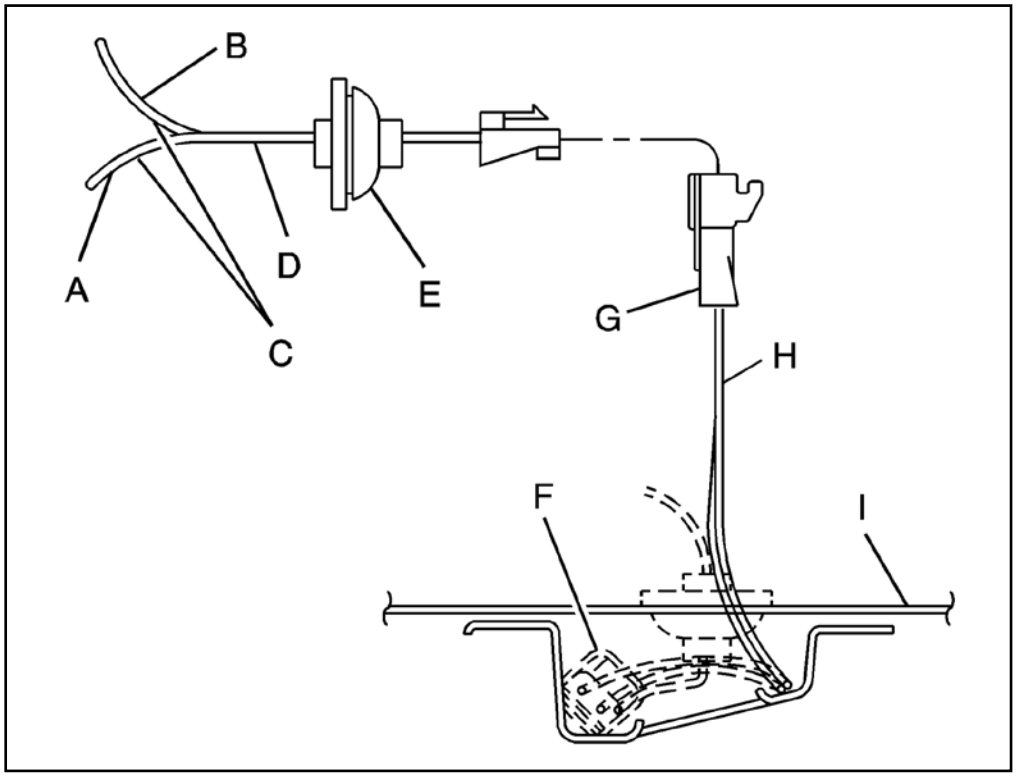
This switch includes wiring provisions for a dealer or a qualified service center to install an auxiliary roof lamp or beacon. When the wiring is connected to the roof mounted lamp, pressing the bottom of the switch will activate the lamp and illuminate an indicator light at the bottom of the switch. Pressing the top of the switch again will turn off the roof mounted lamp and indicator.

1. Be sure that the Roof Beacon switch is off.
2. Insert the sunroof 30A fuse to its proper position.
3. Turn the Roof Beacon switch on. The accessory should now be working. If it is not working, check the connections.
4. After ensuring that the accessory is working properly, install the grommet in the hole. Seal with silicone sealer to prevent water leakage.

Notice: Overloading the vehicle's electrical system may damage your vehicle's accessories.
Do not overload the vehicle's system by having unnecessary accessories on at the same time.

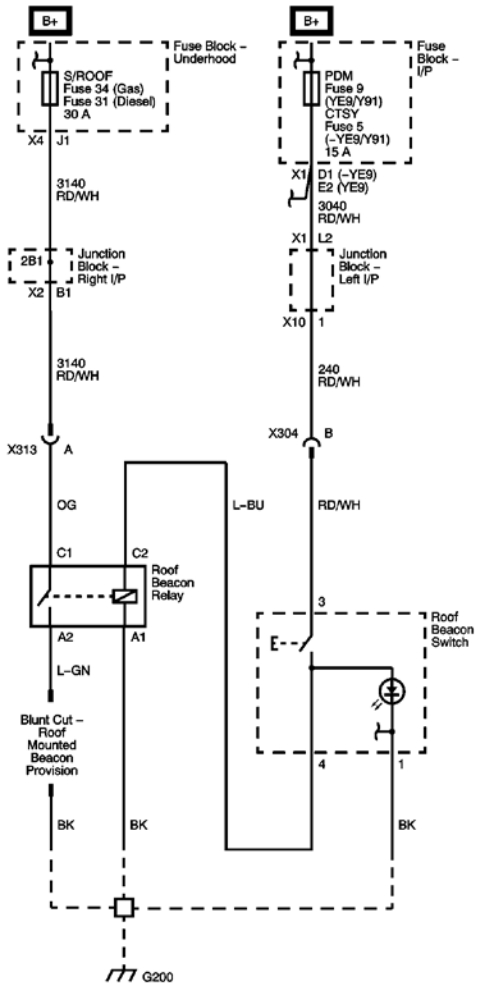
Roof Mounted Beacon (TRW)

Option B



A. Black Wire
B. Orange Wire
C. To Roof Mounted Lamp
D. Harness Assembly
E. Grommet (Roof)
F. Foam Insulator (Adhesive-Backed)
G. Harness Connector, Secondary Lock and Terminal
H Brown Black Wire
I. Vehicle Outer Roof Panel

Roof Mounted Beacon (TRW)



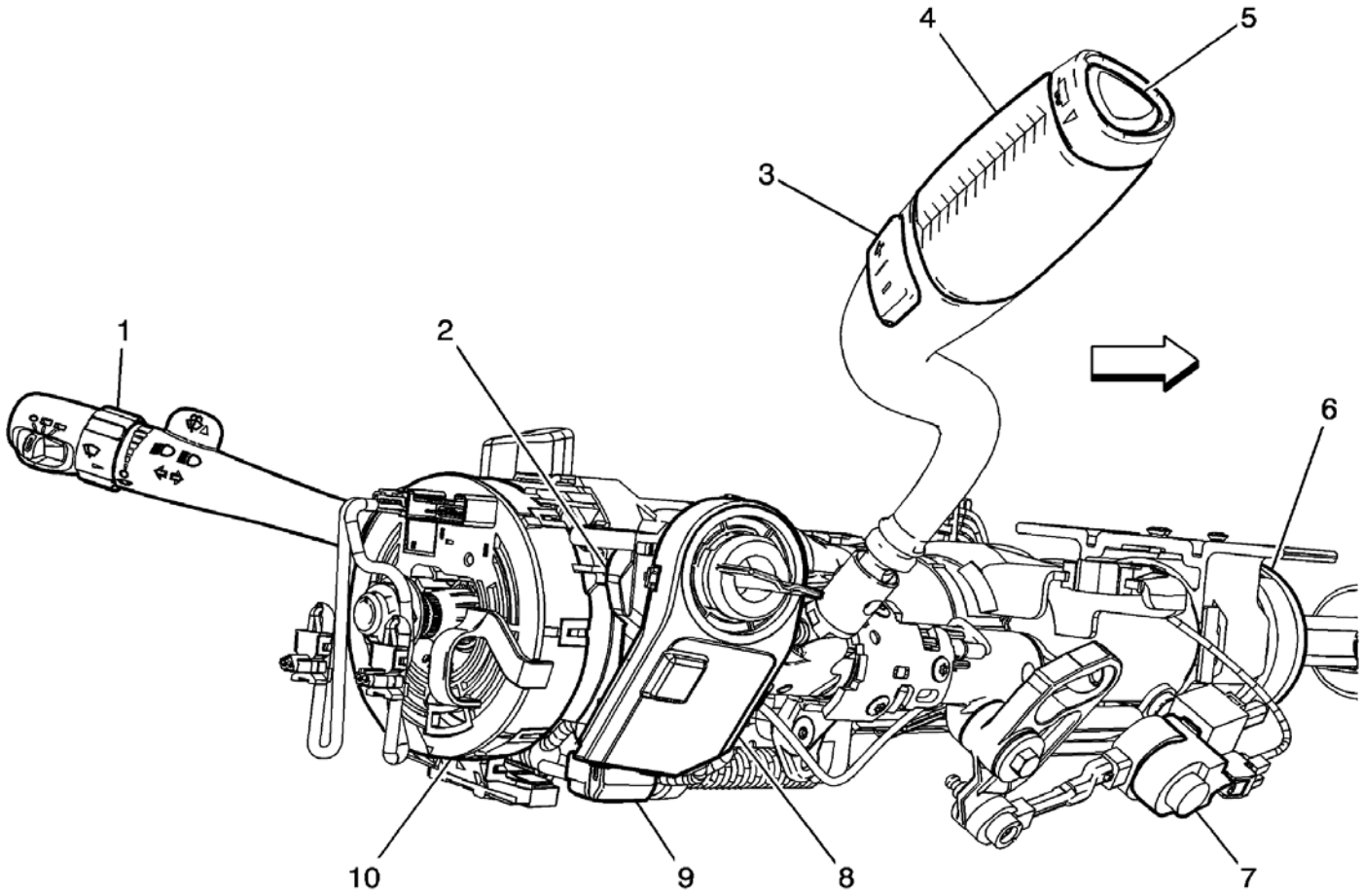
2010 Sierra, Silverado VIN C/K Service Manual | Power and Signal Distribution | Wiring Systems and Power Management | Schematic and Routing Diagrams | Upfitter Provision Schematics |
Document ID 2228842

Roof Beacon Wiring (TRW)

Maintenance

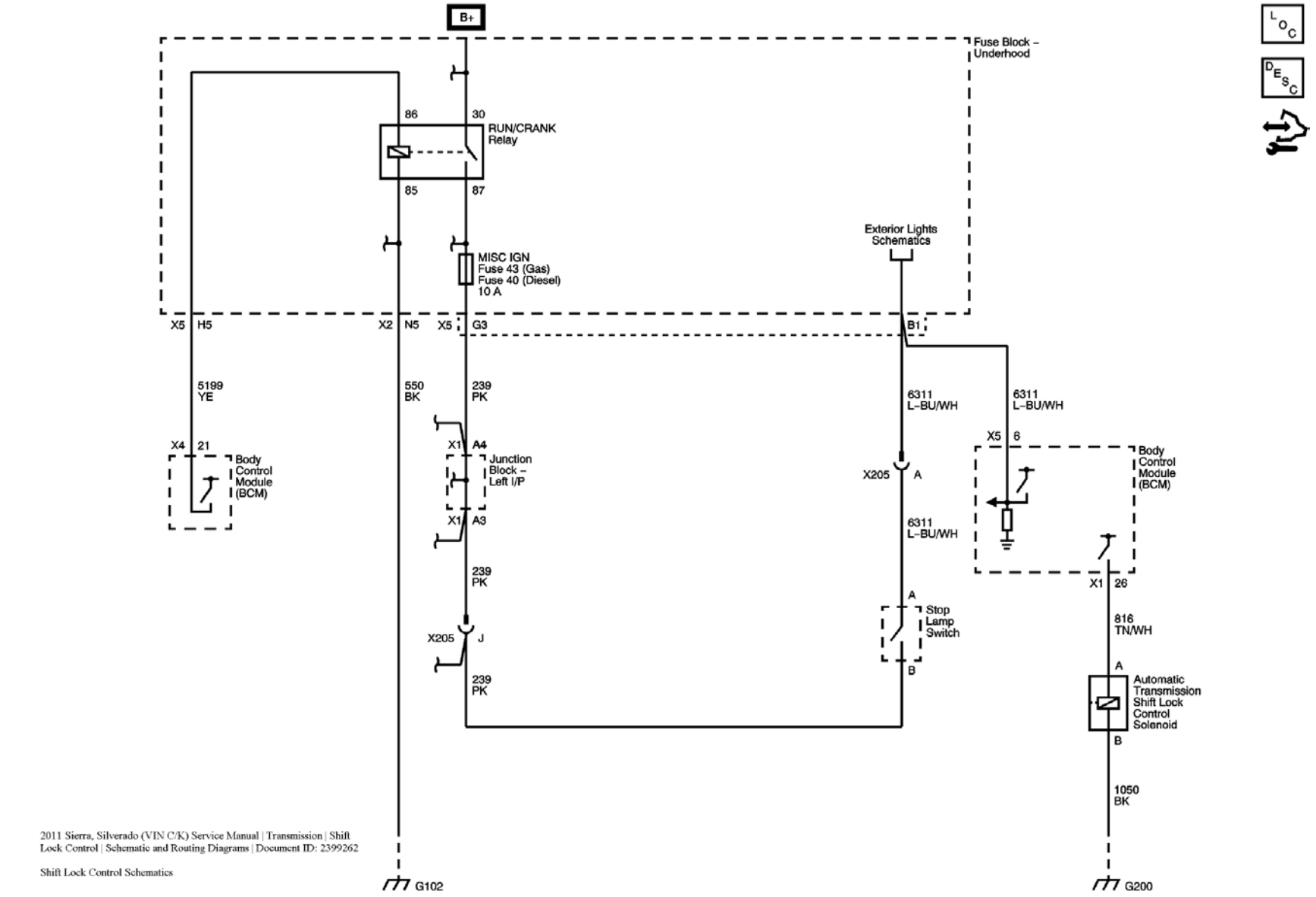
The circuit is fed from the #2 post on the underhood electrical center and protected by the fuse labeled #2 post located in the electrical center. Always replace the fuse with a 30 amp maxi-fuse.

Park Neutral Signal - Steering Column Components



(1) Turn/Signal Multifunction Switch
(2) Ignition Lock Cylinder
(3) Driver Shift Request Switch (MYC/MYD/MW7)
(4) Automatic Transmission Shift Lever (M30/MYC/MYD/MW7)
(5) Tow/Haul Switch (M30/MYC/MYD/MW7)
(6) Steering Angle Sensor (JL4)
(7) Automatic Transmission Shift Lock Control Solenoid
(8) Theft Deterrent Module (TDM)
(9) Ignition Switch
(10) Inflatable Restraint Steering Wheel Module Coil

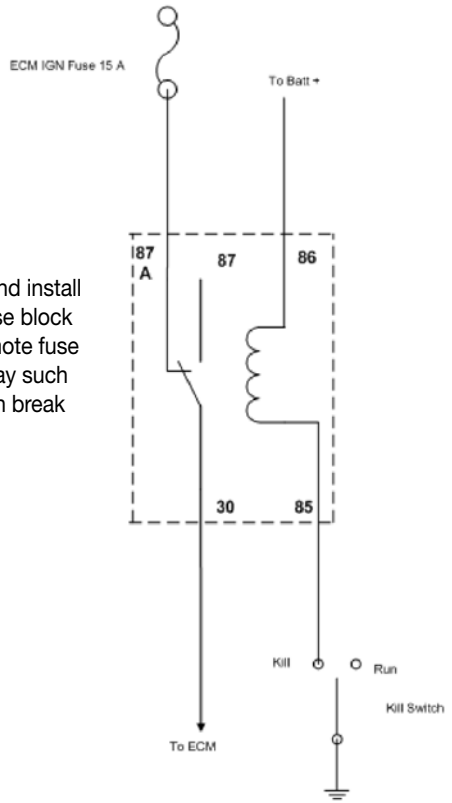
Park Neutral Signal - Shift Lock Control Schematic

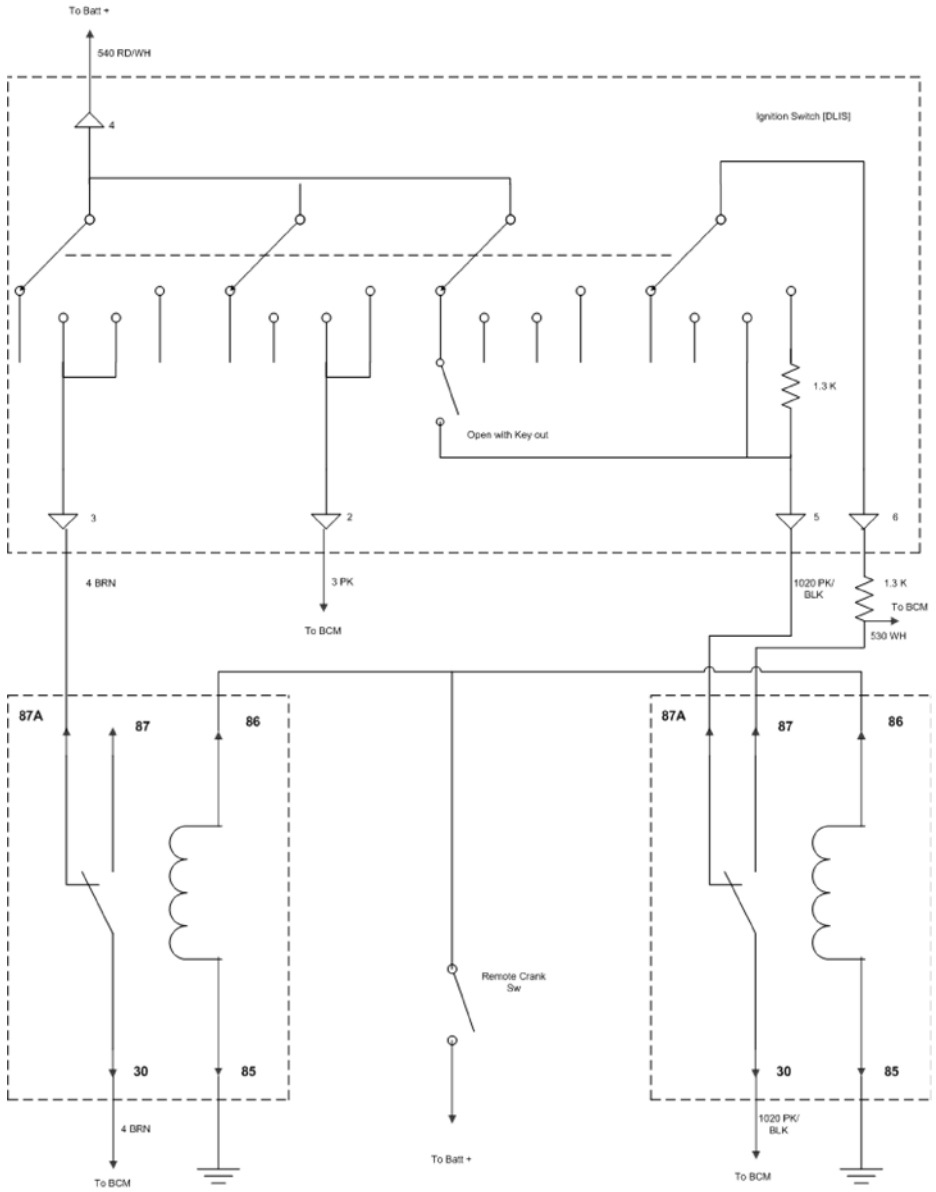


Remote Start Stop

There is no OEM provision to remotely start and stop this vehicle. The best work around solution is to implement the wiring called out in the drawings GM Truck – CK GH Remote Crank and GM Trucks – CK GH – Engine Kill Sw. This method requires the key to be left in the ignition in the RUN position. If desired an interlock can be installed to immobilize the vehicle while in the remote modes. The schematic for this is in the Immobilizer quick reference.

Note: Pull fuse and install terminals into fuse block with wires to remote fuse holder. Install relay such that contacts can break 'load' side.





Trailer Brake Description and Operation

TRAILER BRAKE CONTROLS DESCRIPTION AND OPERATION

Some trucks less than 3900 Kg (8600 lb) GVW with a gasoline engine may be equipped with a Trailer Brake Control Module (TBCM) or a combination Fuel Pump/Trailer Brake Control Module (FTCM) system for electric trailer brakes. Some trucks greater than or equal to 3900 Kg (8600 lb) GVW may be equipped with a integrated Trailer Brake Control Module (TBCM) system for electric trailer brakes. The power output to the trailer brakes is based on the amount of brake pressure being applied in the vehicle's brake system. The available power output to the trailer brakes can be adjusted to a wide range of trailering situations.

Note: Connecting a trailer that is not compatible with the trailer brake system may result in reduced or complete loss of trailer braking. There may be an increase in stopping distance or trailer instability which could result in personal injury or damage to your vehicle, trailer, or other property. An aftermarket controller may be available for use with trailers with surge, air or electric-over-hydraulic trailer brake systems. To determine the type of brakes on your trailer and the availability of controllers, check with your trailer manufacturer or dealer. Do not power-up an aftermarket controller with the factory brake controller at the same time.

The vehicle is equipped with the following trailer braking components:

- Manual Trailer Brake Apply
- Trailer Gain Adjustment
- Trailer Brake Control Panel
- Trailer Brake Driver Information Center Display

The Trailer Brake Control Module (TBCM) or a combination Fuel Pump/Trailer Brake Control Module (FTCM) can support up to a maximum of 4 axles with electric trailer brakes (8 brake magnets).

Manual Trailer Brake Apply

The Manual Trailer Brake Apply Lever is located on the Trailer Brake Control Panel, and is used to apply the trailer's electric brakes independent of your vehicle's brakes. This lever is used in the Trailer Gain Adjustment Procedure to properly adjust the power output to the trailer brakes. Sliding the lever to the left will apply only the trailer brakes. The power output to the trailer is indicated in the Trailer Brake Display Page in the Driver Information Center. If your vehicle's service brakes are applied while using the Manual Trailer Brake Apply Lever, the trailer output power will be the greater of the two.

The trailer and the vehicle's brake lamps will come on when either vehicle braking or manual trailer brakes are applied.

(continued on next page)

Trailer Brake Description and Operation (cont'd)

Manual Trailer Brake Apply

The Manual Trailer Brake Apply Lever is located on the Trailer Brake Control Panel, and is used to apply the trailer's electric brakes independent of your vehicle's brakes. This lever is used in the Trailer Gain Adjustment Procedure to properly adjust the power output to the trailer brakes. Sliding the lever to the left will apply only the trailer brakes. The power output to the trailer is indicated in the Trailer Brake Display Page in the Driver Information Center. If your vehicle's service brakes are applied while using the Manual Trailer Brake Apply Lever, the trailer output power will be the greater of the two.

The trailer and the vehicle's brake lamps will come on when either vehicle braking or manual trailer brakes are applied.

Trailer Gain Adjustment

Trailer Gain should be set for a specific trailering condition, and must be adjusted any time vehicle loading, trailer loading or road surface conditions change.

Setting the Trailer Gain properly is needed for the best trailer stopping performance. A trailer that is over-gained may result in locked trailer brakes. A trailer that is under-gained may result in not enough trailer braking. Both of these conditions may result in poorer stopping and stability of the vehicle and trailer.

After the electrical connection is made to a trailer equipped with electric brakes, the TRAILER CONNECTED message will be momentarily displayed on the Driver Information Center. The Trailer Brake Display Page will appear on the Driver Information Center showing TRAILER GAIN and OUTPUT, after all vehicle related service messages are acknowledged by the driver. The dashed lines in the TRAILER OUTPUT display signifies a disconnected trailer or trailer brake fault condition, and will disappear only when the fault condition is not present.

- Adjust trailer gain in 0.5 step increments up to 10 gain setting by using the gain adjustment +/- buttons on the trailer brake control panel switch. Pressing and holding a gain button will cause the trailer gain to continuously increment or decrement. To turn the output to the trailer off, set the gain to zero.
- Drive the tow vehicle and trailer combination on a level road surface representative of the towing condition, and free of traffic at approximately 32-40 km/h (20-25 mph) and fully apply the manual trailer brake apply lever mechanism located on the trailer brake control panel switch. Adjusting trailer gain at slower speeds may result in an incorrect gain setting.
- Adjust the trailer gain to just below the threshold of trailer wheel lock-up. Important trailer wheel lock-up may not occur if towing a heavily loaded trailer. In this case, adjust the trailer gain to the highest allowable setting for the towing condition.

(continued on next page)

Trailer Brake Description and Operation (cont'd)

Trailer Brake Control Panel

Important: Re-adjust trailer gain any time tow vehicle and trailer loading or road surface conditions change or if you notice trailer wheel lock-up at any time while you are towing.

The trailer brake system has a control panel with the trailer gain and manual apply switches, and is located on the instrument panel to the left of the steering column. See Instrument Panel Overview for more information on location. The control panel and switches allows you to adjust the amount of output, referred to as trailer gain, available to the electric trailer brakes and allows you to manually apply the trailer brakes. The Trailer Brake Control Panel, and switches is used along with the Trailer Brake Display Page on the Driver Information Center to adjust and display power output to the trailer brakes.

Driver Information Indicators and Messages

The following indicators are used to inform the driver of several different factors.

TRAILER CONNECTED

This message will be briefly displayed when a trailer with electric brakes is first connected to the vehicle. This message will automatically turn off in about ten seconds. The driver can also acknowledge this message before it automatically turns off.

CHECK TRAILER WIRING and TRAILER NOT CONNECTED

This message will be displayed if:

- The system detects a trailer with electric brakes is connected to the vehicle, and then the trailer harness becomes disconnected from the vehicle. If a trailer connection is made initially and the vehicle or trailer wiring connections is not correct the TRAILER NOT CONNECTED message will be displayed during the ignition key up as if there is no trailer connected.
- The trailer connection is recognized initially and then a disconnect occurs while the vehicle is stationary, this message will automatically turn off in about thirty seconds. This message will also turn off if the driver acknowledges this message off or if the trailer harness is reconnected.
- A disconnect of the trailer wiring harness occurs while the vehicle is moving, the CHECK TRAILER WIRING message will continue until the ignition is turned off. This message will also turn off if the driver acknowledges this message off or if the trailer harness is re-connected or repairs are completed.
- There is an electrical fault in the wiring to the electric trailer brakes. The CHECK TRAILER WIRING message will continue as long as there is an electrical fault in the trailer wiring. This message will also turn off if the driver acknowledges this message off.

(continued on next page)

Trailer Brake Description and Operation (cont'd)

Driver Information Indicators and Messages (cont'd)

- A poor connection at the 7-way connector may cause the CHECK TRAILER WIRING message. Some aftermarket 7-way trailer side connector adapters or plugs may cause deformation or excessive wear to the vehicles trailer terminals. It is recommended that you use an OEM or Pollak Heavy Duty 7-Way Trailer Side Connector Adapter.

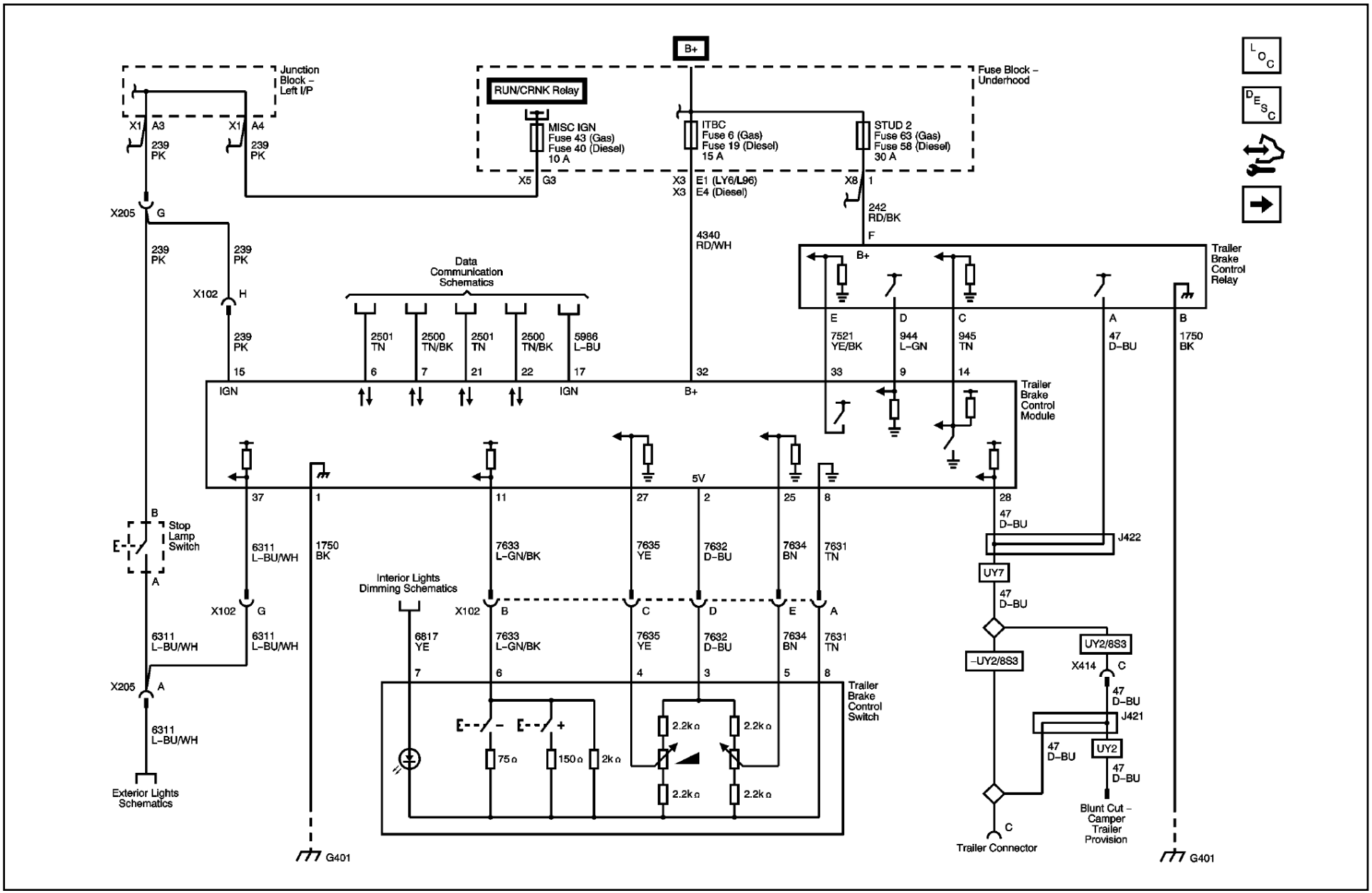
SERVICE TRAILER BRAKE SYSTEM

This message will be displayed when there is a problem with the trailer brake control system. If this message persists over multiple ignition cycles there is a concern with the trailer brake system. Take your vehicle to an authorized GM dealer to have the trailer brake system diagnosed and repaired.

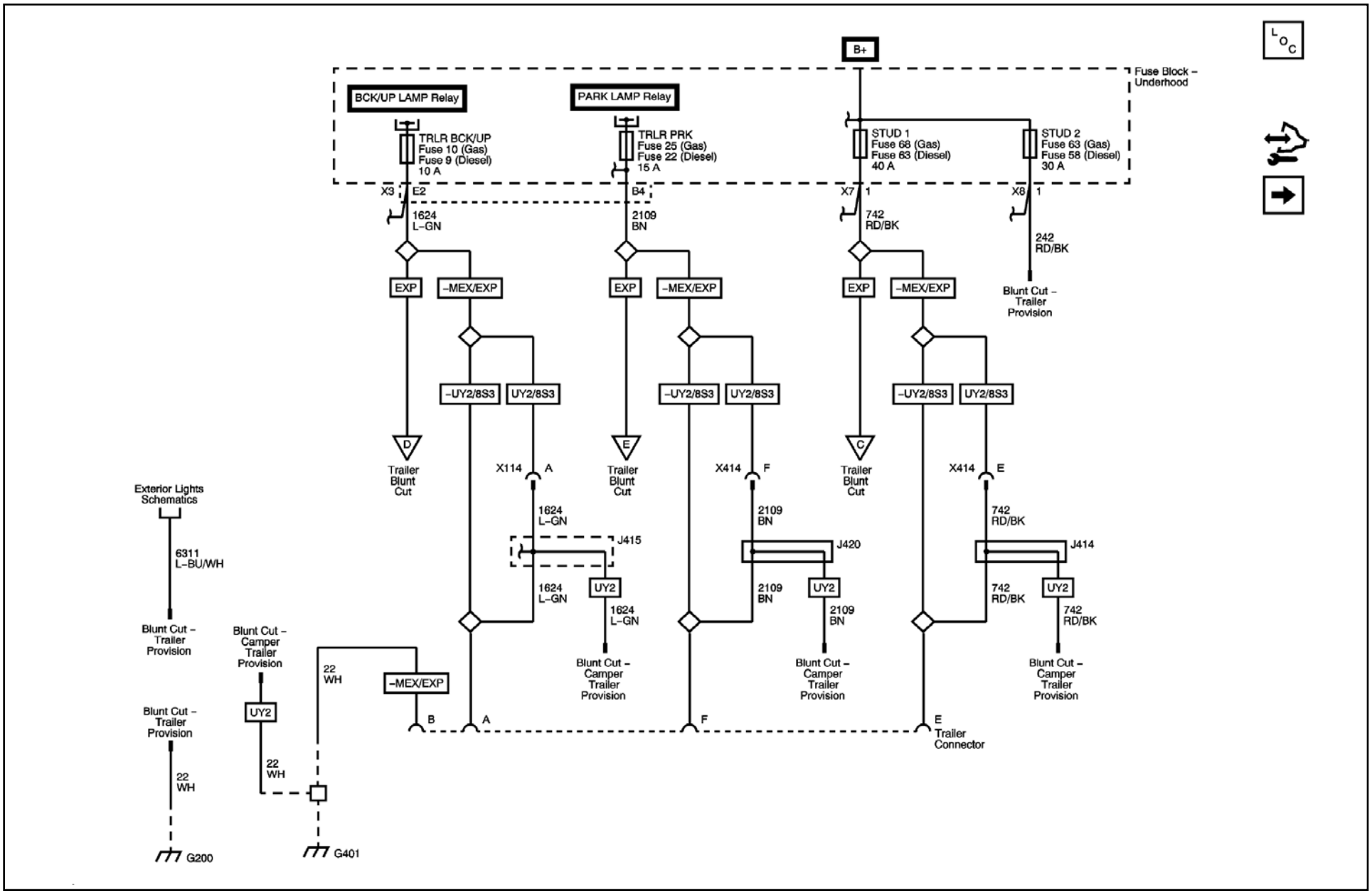
TRAILER GAIN and OUTPUT Display

This display menu can be accessed by scrolling through the Driver Information Center menu, or any time the trailer gain +/- button is depressed, or the manual trailer brake apply lever is actuated. The trailer gain display is 0 to 10 in 0.5 step increments, and indicates the current user setting of the trailer output gain. The trailer output is 0 to 10 bars in 1 bar increments, and indicates the output power provided to the trailer brakes, relative to the gain setting.

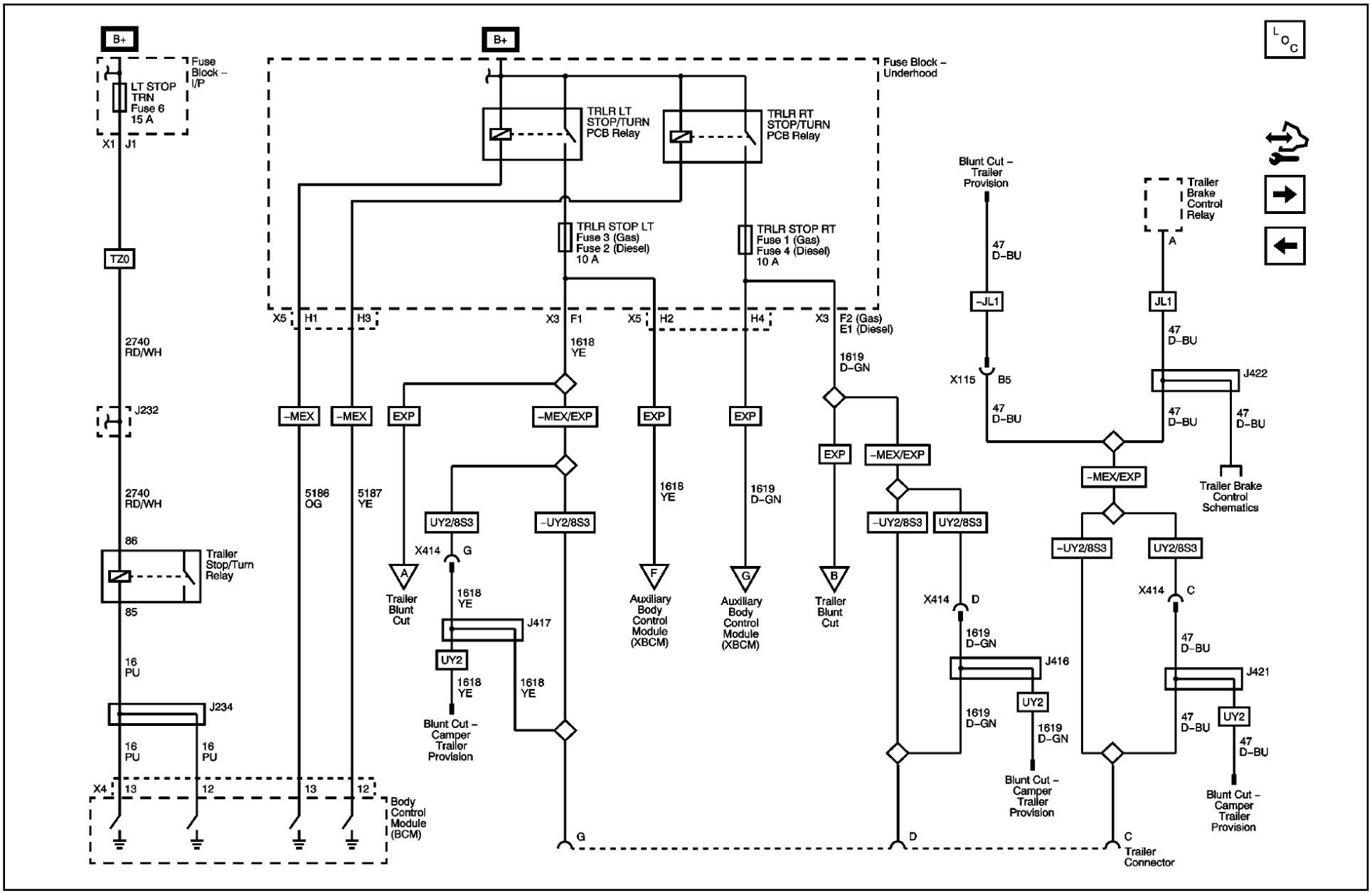
Trailer Brake Control (JL1 except 10 Series)



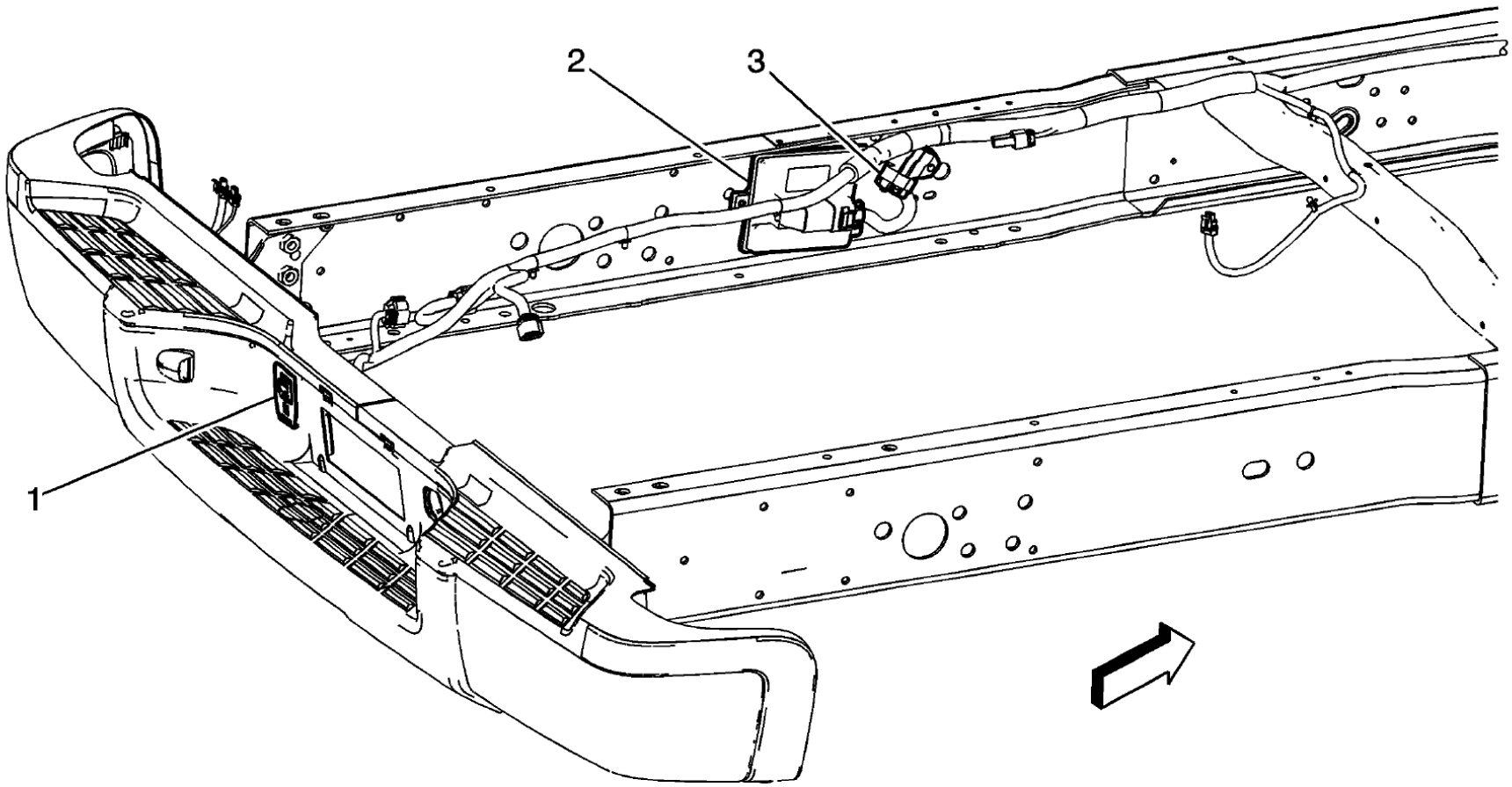
Trailer Connector (1 of 2)



Trailer Connector (2 of 2)



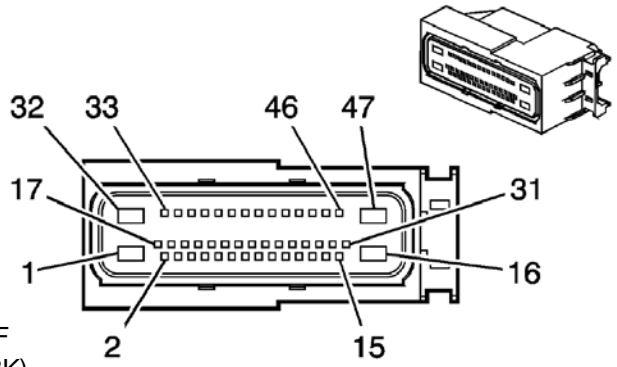
Rear Frame and Underbody Components (20/30 Series)



(1) Trailer Connector (except MEX/EXP)
(2) Trailer Brake Control Module (JL1)
(3) Trailer Brake Control Relay (JL1)

Trailer Brake Control Module (JL1 except 31 Series)

Connector Part Information



Harness: Chassis

OEM: 15491307

Service: 89047377

Description: 47-Way F ASG Series Sealed (BK)

Terminal Part Information

Pins: 1, 32

Terminal/Tray: 15476168/5

Core/Insulation Crimp: F/3

Release Tool/Test Probe: 15315247/J-35616-42 (RD)

Pins: 2, 6-9, 10-11, 14-15, 17, 21-22, 25, 28, 33, 37

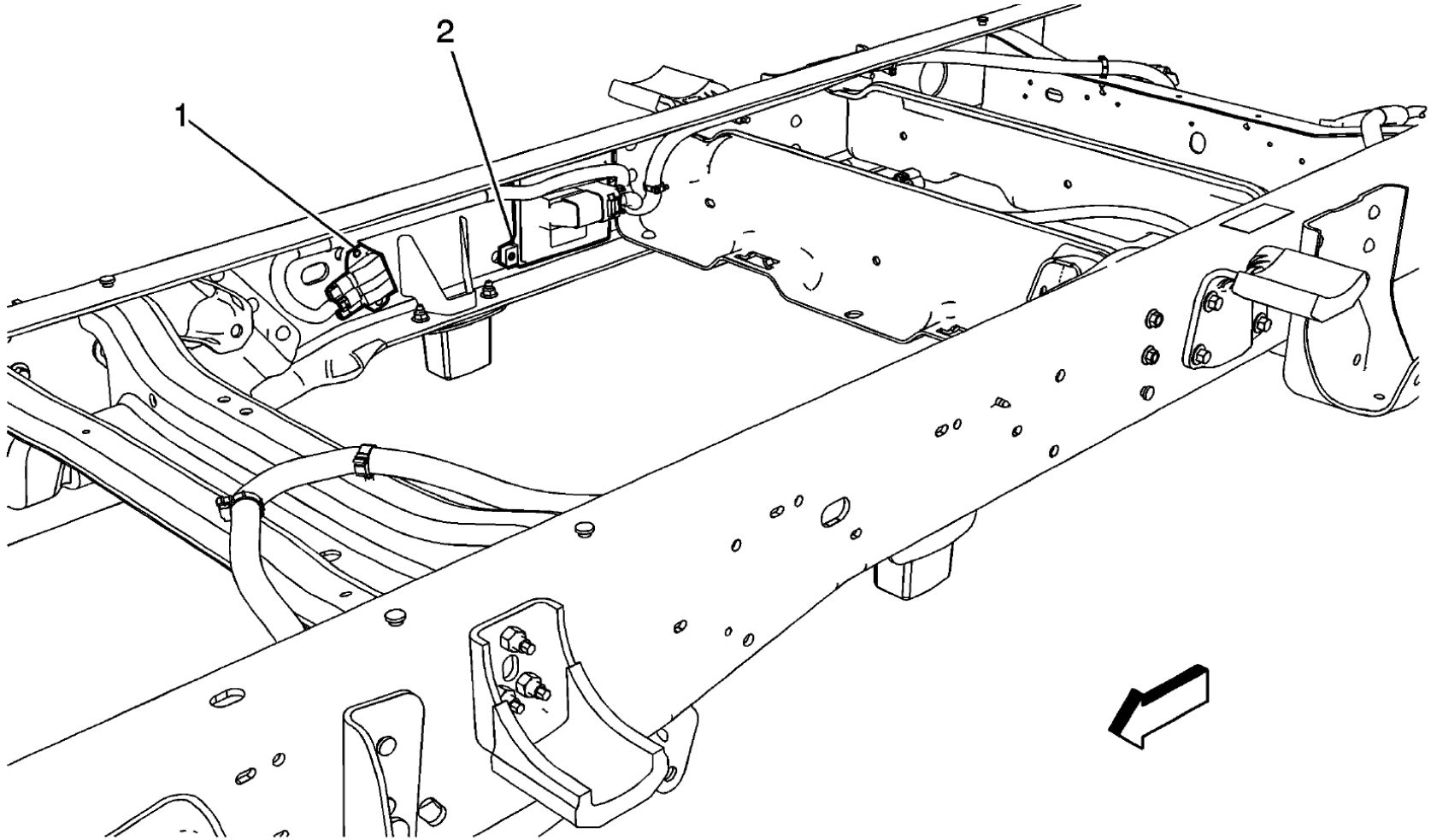
Terminal/Tray: SAITS-A03T-M064/14

Core/Insulation Crimp: 9/9

Release Tool/Test Probe: J-38125-215A/J-35616-64B (L-BU)

Pin	Wire Color	Circuit No.	Function
1	2 BK	1750	Ground
2	0.5 D-BU	7632	5-Volt Reference
3-5	--	--	Not Used
6	0.5 TN	2501	High Speed GMLAN Serial Data Bus (-)
7	0.5 TN/BK	2500	High Speed GMLAN Serial Data Bus (+)
8	0.5 TN	7631	Low Reference
9	0.5 L-GN	944	Relay Feedback
10	--	--	Not Used
11	0.5 L-GN/BK	7633	Integrated Trailer Brake Controller User Gain Signal
12-13	--	--	Not Used
14	0.5 TN	945	Integrated Trailer Brake Relay Control Active Low
15	0.5 PK	239	Ignition 1 Voltage
16	--	--	Not Used
17	0.5 L-BU	5986	Serial Data Communication Enable
18-20	--	--	Not Used
21	0.5 TN	2501	High Speed GMLAN Serial Data Bus (-)
22	0.5 TN/BK	2500	High Speed GMLAN Serial Data Bus (+)
23-24	--	--	Not Used
25	0.5 BN	7634	Integrated Trailer Brake Controller Redundant Manual Apply Signal
26	--	--	Not Used
27	0.5 YE	7635	Integrated Trailer Brake Controller Manual Apply Signal
28	0.5 D-BU	47	Solid State Relay Feedback
29-31	--	--	Not Used
32	2 RD/WH	4340	Battery Positive Voltage
33	0.5 YE/BK	7521	Solid State Relay Enable
34-36	--	--	Not Used
37	0.5 L-BU/WH	6311	TCC Brake Signal
38-47	--	--	Not Used

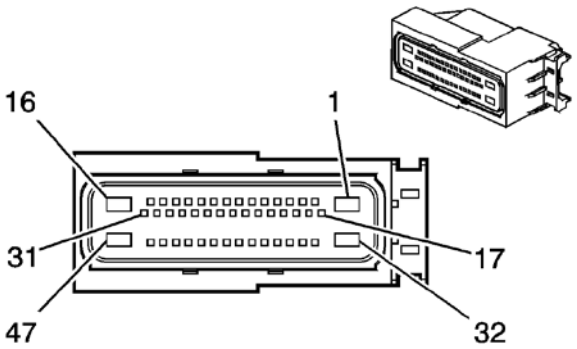
Rear Frame and Underbody Components (31 Series)



(1) Trailer Brake Control Relay
(2) Trailer Brake Control Module

Trailer Brake Control Module (JL1 with 31 Series)

Connector Part Information



Harness: Chassis

OEM: 15491306

Service: 19168025

Description: 47-Way F ASG Series Sealed (BK)

Terminal Part Information

Pins: 1, 32

Terminal/Tray: 15476168/5

Core/Insulation Crimp: F/3

Release Tool/Test Probe: 15315247/J-35616-42 (RD)

Pins: 2, 6-9, 10-11, 14-15, 17, 21-22, 25, 28, 33, 37

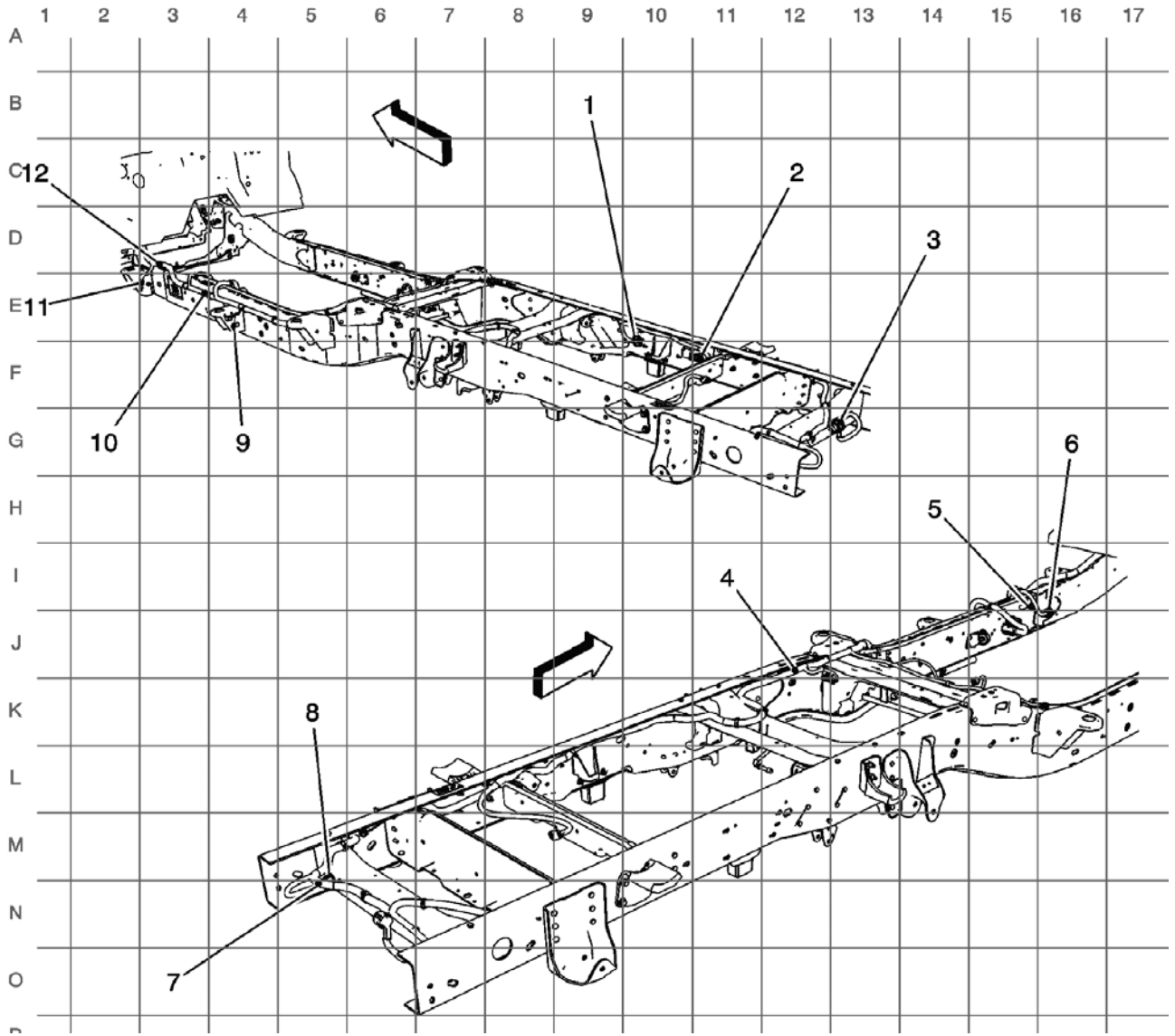
Terminal/Tray: SAITS-A03T-M064/14

Core/Insulation Crimp: 9/9

Release Tool/Test Probe: J-38125-215A/J-35616-64B (L-BU)

Pin	Wire Color	Circuit No.	Function
1	2 BK	1750	Ground
2	0.5 D-BU	7632	5-Volt Reference
3-5	--	--	Not Used
6	0.5 TN	2501	High Speed GMLAN Serial Data Bus (-)
7	0.5 TN/BK	2500	High Speed GMLAN Serial Data Bus (+)
8	0.5 TN	7631	Low Reference
9	0.5 L-GN	944	Relay Feedback
10	--	--	Not Used
11	0.5 L-GN/BK	7633	Integrated Trailer Brake Controller User Gain Signal
12-13	--	--	Not Used
14	0.5 TN	945	Integrated Trailer Brake Relay Control Active Low
15	0.5 PK	239	Ignition 1 Voltage
16	--	--	Not Used
17	0.5 L-BU	5986	Serial Data Communication Enable
18-20	--	--	Not Used
21	0.5 TN	2501	High Speed GMLAN Serial Data Bus (-)
22	0.5 TN/BK	2500	High Speed GMLAN Serial Data Bus (+)
23-24	--	--	Not Used
25	0.5 BN	7634	Integrated Trailer Brake Controller Redundant Manual Apply Signal
26	--	--	Not Used
27	0.5 YE	7635	Integrated Trailer Brake Controller Manual Apply Signal
28	0.5 D-BU	47	Solid State Relay Feedback
29-31	--	--	Not Used
32	2 RD/WH	4340	Battery Positive Voltage
33	0.5 YE/BK	7521	Solid State Relay Enable
34-36	--	--	Not Used
37	0.5 L-BU/WH	6311	TCC Brake Signal
38-47	--	--	Not Used

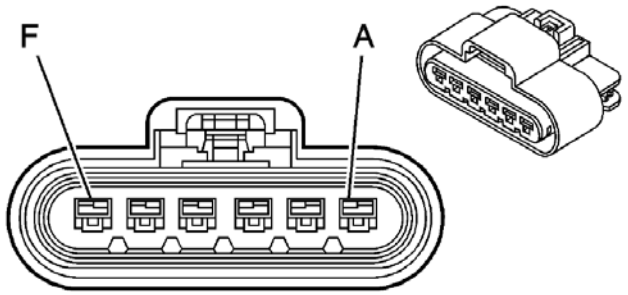
Chassis Harness (31 Series)



(1) Trailer Brake Control Relay (JL1)
(2) J422 (JL1)
(3) Trailer Connector
(4) J331 (Diesel without NQZ/LY6)
(5) X300 (LY6)
(6) X300 (Diesel)
(7) J411 (JL1)
(8) Junction Block - Rear Lamps
(9) G401
(10) J338 (JL1)
(11) G300
(12) J300 (LY6 without NQZ)

Trailer Brake Control Relay (JL1)

Connector Part Information



Harness: Chassis

OEM: 15326635

Service: 88953154

Description: 6-Way F GT 280 Series (BK)

Terminal Part Information

Pins: A-B, F

Terminal/Tray: 15304720/19

Core/Insulation Crimp: 4/5

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: C-D, E

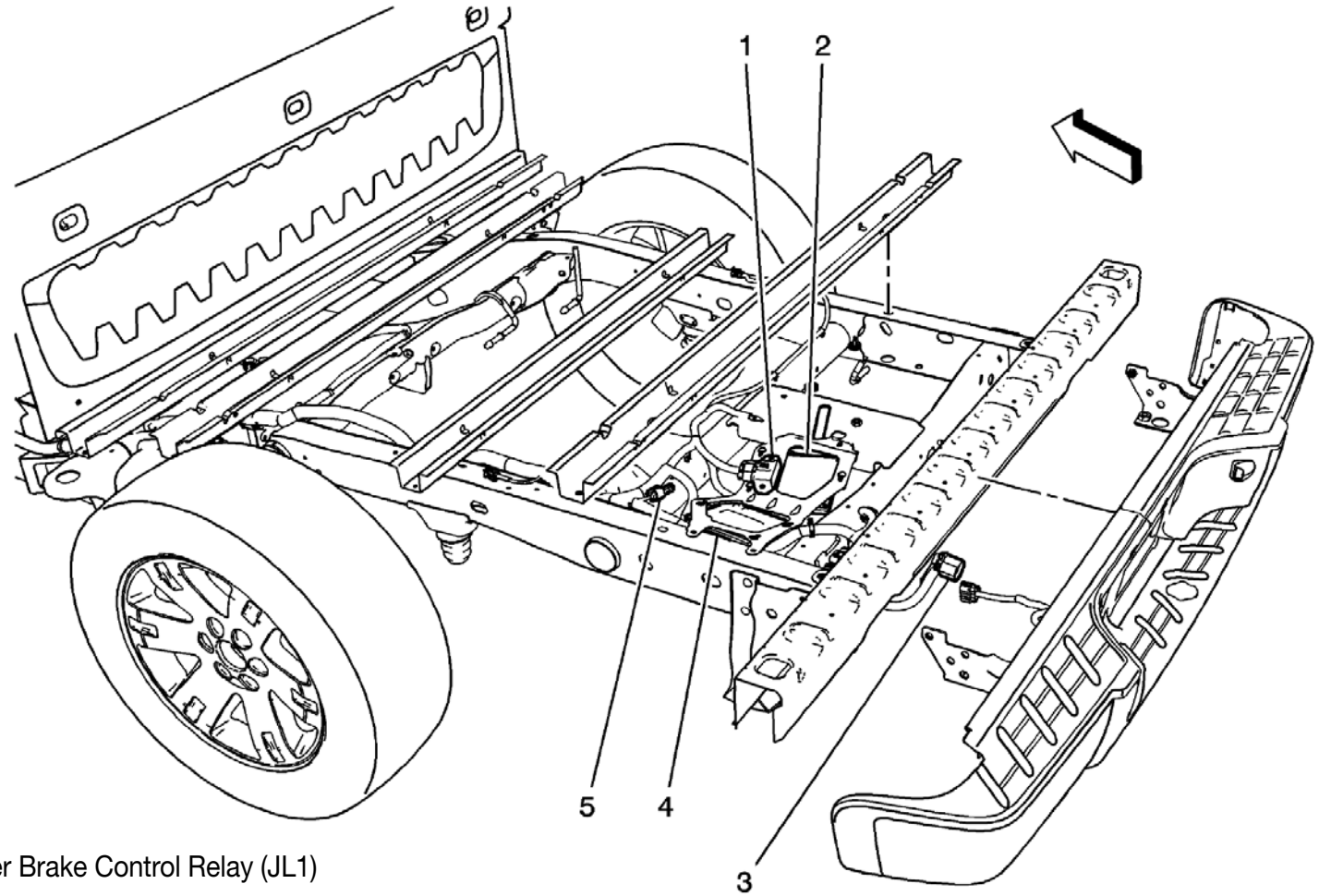
Terminal/Tray: 15304719/19

Core/Insulation Crimp: E/5

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pin	Wire Color	Circuit No.	Function
A	3 D-BU	47	Trailer Brake Output Supply Voltage
B	3 BK	1750	Ground
C	0.5 TN	945	Integrated Trailer Brake Relay Control Active Low
D	0.5 L-GN	944	Relay Feedback
E	0.5 YE/BK	7521	Solid State Relay Enable
F	3 RD/BK	242	Battery Positive Voltage

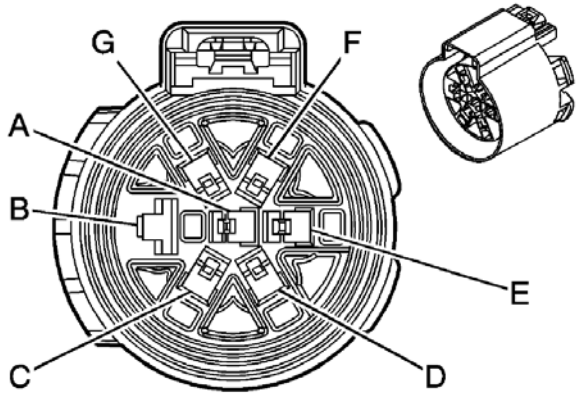
Rear Frame and Underbody Components (10 Series)



(1) Trailer Brake Control Relay (JL1)
(2) Fuel Pump/Trailer Brake Control Module (JL1)
(3) Trailer Connector (except MEX or EXP)
(4) Fuel Pump Flow Control Module (except LU3 or JL1)
(5) Data Link Resistor

Trailer Connector (except MEX or EXP)

Connector Part Information



Harness: Camper

OEM: 13626146

Service:15306164

Description: 7-Way F Metri-Pack 280/630 Series Sealed (D-GY)

Terminal Part Information

Pins: A, D, F, G

Terminal/Tray: 12110847/4

Core/Insulation Crimp: C/5

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: B

Terminal/Tray: 15305232/23

Core/Insulation Crimp: B/3

Release Tool/Test Probe: 12094430/J-35616-42 (RD)

Pins: C, E

Terminal/Tray: 12110845/4

Core/Insulation Crimp: F/5

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pin	Wire Color	Circuit No.	Function
A	1 L-GN	1624	Trailer Backup Lamps Supply Voltage
B	5 WH	22	Ground
C	3 D-BU	47	Solid State Relay Feedback
D	0.8 D-GN	1619	Trailer Right Rear Turn/Stop Lamp Supply Voltage
E	3 RD/BK	742	Battery Positive Voltage
F	1 BN	2109	Trailer Park Lamps Supply Voltage
G	0.8 YE	1618	Trailer Left Rear Turn/Stop Lamp Supply Voltage

Trailer Brake - Installation of Aftermarket Trailer Brake Controller

#06-08-45-008D: Information on Auxiliary Power Wire at Trailer and Installation of Aftermarket Trailer Brake Controller - Towing, Tow - (Jul 12, 2010)

Subject:	Information on Auxiliary Power Wire at Trailer and Installation of Aftermarket Trailer Brake Controller -- Towing, Tow
Models:	2007-2011 Cadillac Escalade, Escalade ESV, Escalade EXT
	2007-2011 Chevrolet Avalanche, Silverado, Suburban, Tahoe
	2007-2011 GMC Sierra, Yukon, Yukon Denali, Yukon XL, Yukon Denali XL
	2008-2011 HUMMER H2

This bulletin is being revised to add the 2011 model year and information about the orientation of the ringlet. Please discard Corporate Bulletin Number 06-08-45-008C (Section 08 - Body and Accessories).

Important: Installation of an electric brake controller and the wiring connections outlined in this bulletin are the responsibility of the dealership or customer. These repairs should never be charged to warranty. If you have any questions, please consult with your District Service Manager.

Some customers may have questions on how to connect an electric trailer brake controller or where the brake controller pigtail harness is located.

Starting with the new 2007 full-size utilities and pickups and 2008 HUMMER H2, there is no longer an electric trailer brake controller pigtail harness.

An aftermarket brake controller will need to be installed/connected to the blunt wires under the left side of the IP for vehicles built ***without*** JL1 - Integrated Brake Controller (full-size utilities and pickups).. The following steps should be used to complete the installation.

(continued on next page)

Trailer Brake - Installation of Aftermarket Trailer Brake Controller (cont'd)

Important: Installation of an electric brake controller and the wiring connections outlined in this bulletin are the responsibility of the dealership or customer. These repairs should never be charged to warranty. If you have any questions, please consult with your District Service Manager.

Some customers may have questions on how to connect an electric trailer brake controller or where the brake controller pigtail harness is located.

Starting with the new 2007 full-size utilities and pickups and 2008 HUMMER H2, there is no longer an electric trailer brake controller pigtail harness.

An aftermarket brake controller will need to be installed/connected to the blunt wires under the left side of the IP for vehicles built ***without*** JL1 - Integrated Brake Controller (full-size utilities and pickups). The following steps should be used to complete the installation.

1. Locate the trailer brake control circuits that are looped and taped to the main harness under the instrument panel.

2. Pull the trailering wire harness down.

(continued on next page)

Trailer Brake - Installation of Aftermarket Trailer Brake Controller (cont'd)

3. Match the vehicle harness label circuit functions to the trailer brake controller jumper harness functions.

Important: The color or wires to be joined together may not match.

- Dark Blue Wire: switched power from controller to trailer brakes
- Red with Black Stripe: fused vehicle power to electrical brake controller
- Light Blue with White Stripe: Brake switch input to power electric brake controller
- White: ground
- Orange: CHMSL (Center High Mounted Stop Lamp) -- not required with most systems

4. After completing the under dash connections to the electric brake controller, open the hood and locate the red wire that is taped to the harness between the underhood electrical center and the driver side front fender.
5. Break the tape on the red/black wire and pull it toward the front of vehicle.
6. Remove the lid from the electrical center.

Important: Ensure that the ringlets are not interfering with the UBEC cover.

7. Place the terminal on the larger of the two studs at the front of the electrical center and secure with an M8 nut. This is circuit #242 to stud #2, to power the aftermarket trailer brake controller.

Important: The fuse is already present in the vehicle to power the electrical trailer brake controller system.

(continued on next page)

Trailer Brake - Installation of Aftermarket Trailer Brake Controller (cont'd)

Auxiliary Power (Applies to All LD & 07-09 HD's Only)

Circuit #742 for Auxiliary Power at the 7-way trailer connector is no longer connected by the GM Assembly Plant. If the customer desires auxiliary power at the trailer connector location (i.e. refrigeration, battery charger or interior light in the trailer), complete the following steps to connect circuit #742:

1. Locate the red/black wire, looped and taped to the chassis harness, below the brake master cylinder.
2. Break the tape and route the wire to the front of the underhood electrical center.

Important: Ensure that the ringlets are not interfering with the UBEC cover.

3. Place the terminal on the smaller of the two studs on the electrical center and secure with an M6 fastener. This is circuit #742 to stud #1 for auxiliary power to the 7-way trailer connector.
4. ONLY for vehicles without RPO TP2 - Auxiliary Battery, install a 40 amp fuse to power the circuit.

Important: For vehicles equipped ***with*** RPO TP2 -- Devices powered by this fuse will drain the vehicle battery if left connected with the vehicle not running.

Warranty Information

This installation procedure is to be performed at the customer's request and at their expense. It is not a warranty repair and a claim should not be submitted for reimbursement.

GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. See your GM dealer for information on whether your vehicle may benefit from the information.

WE SUPPORT VOLUNTARY TECHNICIAN CERTIFICATION

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Trailer Brake - Installation of Aftermarket Trailer Brake Controller (cont'd)

#07-08-45-001E: Procedure for Installation of Aftermarket Trailer Brake Controller in Lieu of Factory Installed Integrated Trailer Brake Controller - (Jul 12, 2010)

Subject:	Procedure for Installation of an Aftermarket Trailer Brake Controller in Lieu of Factory Installed Integrated Trailer Brake Controller
Models:	2007-2011 Chevrolet Silverado
	2009-2011 Chevrolet Suburban, Tahoe
	2007-2011 GMC Sierra
	2009-2011 GMC Yukon Models
	with Integrated Trailer Brake Controller

This bulletin is being revised to add the 2011 model year. Please discard Corporate Bulletin Number 07-08-45-001D (Section 08 - Body & Accessories).

Some customers may request to have an aftermarket trailer brake controller added, in lieu of the factory integrated trailer brake controller (ITBC). This request may be made if the trailer being towed is equipped with electric over hydraulic brakes. This style of trailer brake system is not supported by the ITBC. An aftermarket trailer brake controller may be installed to operate with the electric over hydraulic brakes, however the factory installed ITBC system will be disabled.

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Trailer Brake - Installation of Aftermarket Trailer Brake Controller (cont'd)

Installation Instructions

To install an aftermarket trailer brake controller, use the four blunt cut wires located near the data link connector. Make the following changes to the vehicle harness:

Four Blunt Cut Wires		
Dark Blue	Circuit 47	Brake Signal to Trailer Connector
Red/Black	Circuit 242	Battery Power
Light Blue/White	Circuit 6311	Brake Switch Input
White	Circuit 22	Ground

1. The Red/Black wire, circuit 242, must be connected to stud #2 of the 30 Amp fuse of the underhood fuse block. This wire is located between the left fender and the underhood fuse block.
2. Locate connector X126 or X115 (varies with vehicle build; refer to SI) near the underhood fuse block. Refer to SI Document ID# 1849049 - I/P Harness-Engine Compartment. Circuit 47 from the blunt cut wires near the data link connector will end at connector X126 terminal "G" or X115 terminal "B5." Obtain enough Dark Blue 12 gauge wire to run from X126/X115 to the 7-way trailer connector at the bumper. On one end of the Dark Blue wire attach terminal part number 15304732, located in Delphi Tray 8 and insert into X126 "G" or terminal part number 15304720 located in Delphi Tray 19 and insert into X115 "B5." Run the Dark Blue wire in its own conduit along the frame to the 7-way trailer connector at the bumper. Remove circuit 47 from the 7-way trailer connector terminal "C" and tape the bare terminal and attach to the harness. Attach terminal part number 12110853, located in Delphi Tray 4, to the other end of the Dark Blue wire and insert it into the 7-way trailer connector terminal "C."

Important: This procedure will not result in any trailer brake related display messages to be set. However, ITBC diagnostics will continue to function. If an ITBC fault is detected, a "Service Trailer Brake System" message will be displayed on the driver information center (DIC) and an appropriate DTC will be stored in the ITBC module. The operator will still be able to adjust gain and access the "Trailer Gain / Output" display page in the DIC. However, the factory installed ITBC system will not sense a trailer connection and will not provide output to the trailer.

Warranty Information

This installation procedure is to be performed at the customer's request and at their expense. It is not a warranty repair and a claim should not be submitted for reimbursement.

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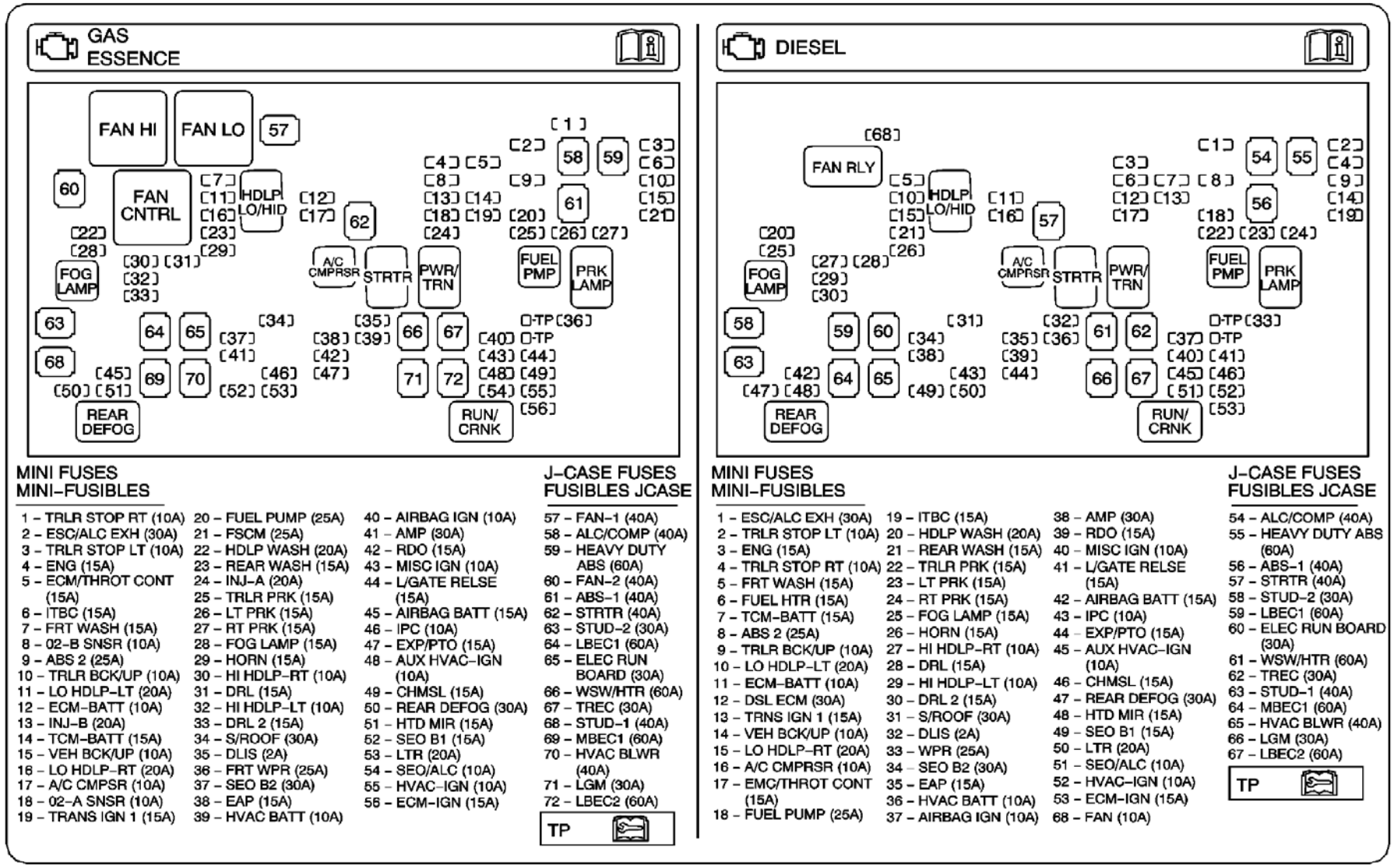
Fuse Block - Underhood Label



MINI FUSES
MINI–FUSIBLES

1 – TRLR STOP RT (10A)
2 – ESC/ALC EXH (30A)
3 – TRLR STOP LT (10A)
4 – ENG (15A)
5 – ECM/THROT CONT (15A)
6 – ITBC (15A)
7 – FRT WASH (15A)
8 – 02–B SNSR (10A)
9 – ABS 2 (25A)
10 – TRLR BCK/UP (10A)
11 – LO HDLP–LT (20A)
12 – ECM–BATT (10A)
13 – INJ–B (20A)
14 – TCM–BATT (15A)
15 – VEH BCK/UP (10A)
16 – LO HDLP–RT (20A)
17 – A/C CMPSR (10A)
18 – 02–A SNSR (10A)
19 – TRANS IGN 1 (15A)
20 – FUEL PUMP (25A)
21 – FSCM (25A)
22 – HDLP WASH (20A)
23 – REAR WASH (15A)
24 – INJ–A (20A)
25 – TRLR PRK (15A)
26 – LT PRK (15A)
27 – RT PRK (15A)
28 – FOG LAMP (15A)
29 – HORN (15A)
30 – HI HDLP–RT (10A)
31 – DRL (15A)
32 – HI HDLP–LT (10A)
33 – DRL 2 (15A)
34 – S/ROOF (30A)
35 – DLIS (2A)
36 – FRT WPR (25A)
37 – SEO B2 (30A)
38 – EAP (15A)
39 – HVAC BATT (10A)
40 – AIRBAG IGN (10A)
41 – AMP (30A)
42 – RDO (15A)
43 – MISC IGN (10A)
44 – L/GATE RELSE (15A)
45 – AIRBAG BATT (15A)
46 – IPC (10A)
47 – EXP/PTO (15A)
48 – AUX HVAC–IGN (10A)
49 – CHMSL (15A)
50 – REAR DEFOG (30A)
51 – HTD MIR (15A)
52 – SEO B1 (15A)
53 – LTR (20A)
54 – SEO/ALC (10A)
55 – HVAC–IGN (10A)
56 – ECM–IGN (15A)

J–CASE FUSES
FUSIBLES JCASE

57 – FAN–1 (40A)
58 – ALC/COMP (40A)
59 – HEAVY DUTY ABS (60A)
60 – FAN–2 (40A)
61 – ABS–1 (40A)
62 – STRTR (40A)
63 – STUD–2 (30A)
64 – LBEC1 (60A)
65 – ELEC RUN BOARD (30A)
66 – WSW/HTR (60A)
67 – TREC (30A)
68 – STUD–1 (40A)
69 – MBEC1 (60A)
70 – HVAC BLWR (40A)
71 – LGM (30A)
72 – LBEC2 (60A)

TP

MINI FUSES
MINI–FUSIBLES

1 – ESC/ALC EXH (30A)
2 – TRLR STOP LT (10A)
3 – ENG (15A)
4 – TRLR STOP RT (10A)
5 – FRT WASH (15A)
6 – FUEL HTR (15A)
7 – TCM–BATT (15A)
8 – ABS 2 (25A)
9 – TRLR BCK/UP (10A)
10 – LO HDLP–LT (20A)
11 – ECM–BATT (10A)
12 – DSL ECM (30A)
13 – TRNS IGN 1 (15A)
14 – VEH BCK/UP (10A)
15 – LO HDLP–RT (20A)
16 – A/C CMPRSR (10A)
17 – EMC/THROT CONT (15A)
18 – FUEL PUMP (25A)
19 – ITBC (15A)
20 – HDLP WASH (20A)
21 – REAR WASH (15A)
22 – TRLR PRK (15A)
23 – LT PRK (15A)
24 – RT PRK (15A)
25 – FOG LAMP (15A)
26 – HORN (15A)
27 – HI HDLP–RT (10A)
28 – DRL (15A)
29 – HI HDLP–LT (10A)
30 – DRL 2 (15A)
31 – S/ROOF (30A)
32 – DLIS (2A)
33 – WPR (25A)
34 – SEO B2 (30A)
35 – EAP (15A)
36 – HVAC BATT (10A)
37 – AIRBAG IGN (10A)
38 – AMP (30A)
39 – RDO (15A)
40 – MISC IGN (10A)
41 – L/GATE RELSE (15A)
42 – AIRBAG BATT (15A)
43 – IPC (10A)
44 – EXP/PTO (15A)
45 – AUX HVAC–IGN (10A)
46 – CHMSL (15A)
47 – REAR DEFOG (30A)
48 – HTD MIR (15A)
49 – SEO B1 (15A)
50 – LTR (20A)
51 – SEO/ALC (10A)
52 – HVAC–IGN (10A)
53 – ECM–IGN (15A)
68 – FAN (10A)

J–CASE FUSES
FUSIBLES JCASE

54 – ALC/COMP (40A)
55 – HEAVY DUTY ABS (60A)
56 – ABS–1 (40A)
57 – STRTR (40A)
58 – STUD–2 (30A)
59 – LBEC1 (60A)
60 – ELEC RUN BOARD (30A)
61 – WSW/HTR (60A)
62 – TREC (30A)
63 – STUD–1 (40A)
64 – MBEC1 (60A)
65 – HVAC BLWR (40A)
66 – LGM (30A)
67 – LBEC2 (60A)

TP

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Fuse Block - Underhood Label Usage - Diesel

Pin	Wire	Circuit	Function
1	ESC/ALC EXH Fuse	30A	Not Used
2	TRLR STOP LT Fuse	10A	Trailer Wiring, Auxiliary Body Control Module (XBCM) (EXP), Trailer Wiring
3	ENG Fuse	15A	Mass Air Flow (MAF)/Intake Air Temperature (IAT) Sensor
4	TRLR STOP RT Fuse	10A	Trailer Wiring, Auxiliary Body Control Module (XBCM) (EXP), Trailer Wiring
5	FRT WASH Fuse	15A	Windshield Washer Fluid Pump
6	FUEL HTR Fuse	15A	Not Used
7	TCM-BATT Fuse	15A	Transmission Control Module (TCM)
8	ABS 2 Fuse	25A	Electronic Brake Control Module (EBCM)
9	TRLR BCK/UP Fuse	10A	Backup Alarm (8S3), Trailer Wiring
10	LO HDLP-LT Fuse	20A	Headlamp - Left Low Beam
11	ECM-BATT Fuse	10A	Engine Control Module (ECM)
12	DSL ECM Fuse	30A	Engine Control Module (ECM)
13	TRANS IGN 1 Fuse	15A	Front Drive Axle Actuator (NQF or NQG), Glow Plug Control Module (GPCM), Transmission Control Module (TCM)
14	VEH BCK/UP Fuse	10A	Backup Lamp - Left, Backup Lamp - Right
15	LO HDLP-RT Fuse	20A	Headlamp - Right Low Beam
16	A/C CMPRSR Fuse	10A	A/C Compressor Clutch
17	ECM/THROT CONT Fuse	15A	Reductant Sensor Module
18	FUEL PUMP Fuse	25A	Fuel Pump, Fuel Pump and Sender Assembly – Front
19	ITBC Fuse	15A	Integrated Trailer Brake Control Module (JL1)
20	HDLP WASH Fuse	20A	Not Used
21	REAR WASH Fuse	15A	Not Used
22	TRLR PRK Fuse	15A	Trailer Wiring
23	LT PRK Fuse	15A	Clearance Lamp (U01), Clearance Lamp – Left Front (R05), Clearance Lamp – Left Rear (R05), License Lamp – Left, Park/Turn Signal Lamp – Left Front Lower, Park/Turn Signal Lamp – Left Front Upper, Roof Marker Lamp – Left (U01), Roof Marker Lamp – Right (U01), Side Marker Lamp – Left Front (Z88), Side Marker Lamp – Left Rear (Z88), Tail/Stop and Turn Signal Lamp – Lower Left, Tail/Stop and Turn Signal Lamp – Upper Left

(continued on next page)

Fuse Block - Underhood Label Usage - Diesel (cont'd)

Pin	Wire	Circuit	Function
24	RT PRK Fuse	15A	Clearance Lamp – Right Front (R05), Clearance Lamp – Right Rear (R05), License Lamp – Right, Park/Turn Signal Lamp – Right Front Upper, Park/ Turn Signal Lamp – Right Front Lower, Side Marker Lamp - Righ Front (Z88), Side Marker Lamp – Right Rear (Z88), Marker Lamp – Tailgate, Tail/ Stop and Turn Signal Lamp – Lower Right, Tail/Stop and Turn Signal Lamp – Upper Right
25	FOG LAMP Fuse	15A	Fog Lamp - Left Front (T96), Fog Lamp - Right Front (T96)
26	HORN Fuse	15A	Horn - Left, Horn - Right (7Z1 or YE9)
27	HI HDLP-RT Fuse	10A	Headlamp - Right High Beam
28	DRL Fuse	15A	DRL 2 Fuse
29	HI HDLP-LT Fuse	10A	Headlamp - Left High Beam
30	DRL 2 Fuse	15A	LO HDLP - LT Fuse, LO HDLP - RT Fuse
31	S/ROOF Fuse	30A	Roof Beacon Relay (TRW), Sunroof Module (CF5)
32	DLIS Fuse	2A	Ignition Switch, Theft Deterrent Module (TDM)
33	WPR Fuse	25A	WIPER CONTROL PCB Relay
34	SEO B2 Fuse	30A	Emergency Vehicle Roof Lamp Relay (5Y0)
35	EAP Fuse	15A	ELECTRONIC ADJUSTABLE PEDALS PCB Relay, PARK ENABLE PCB Relay
36	HVAC BATT Fuse	10A	HVAC Control Module
37	AIRBAG IGN Fuse	10A	Inflatable Restraint I/P Module Disable Switch (C99), Inflatable Restraint I/P Module Indicator, Inflatable Restraint Sensing and Diagnostic Module (SDM)
38	AMP Fuse	30A	Audio Amplifier (UQA)
39	RDO Fuse	15A	Chime Module (UL5), Digital Radio Receiver (U2K), Radio, Rear Seat Audio (RSA) Control (UK6)
40	MISC IGN Fuse	10A	Auxiliary Body Control Module (XBCM) (EXP), Stop Lamp Switch, Trailer Brake Control Module (JL1), Transfer Case Shift Control Module (NQF or NQH)
41	L/GATE RELSE Fuse	15A	Not Used
42	AIRBAG BATT Fuse	15A	Inflatable Restraint Passenger Presence System (PPS) Module, Inflatable Restraint Sensing and Diagnostic Module (SDM), Inflatable Restraint Vehicle Rollover Sensor (ASF)
43	IPC Fuse	10A	Body Control Module (BCM), Instrument Panel Cluster (IPC)
44	EXP/PTO Fuse	15A	Auxiliary Body Control Module (XBCM) (EXP) Power Take Off Relay (PTO)
45	AUX HVAC-IGN Fuse	10A	Heated Steering Wheel Module Control (KA9), Inside Rearview Mirror (ISRVM), Instrument Panel Cluster (IPC)

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Fuse Block - Underhood Label Usage - Diesel (cont'd)

Pin	Wire	Circuit	Function
46	CHMSL Fuse	15A	Center High Mounted Stop Lamp (CHMSL)
47	REAR DEFOG Fuse	30A	Rear Window Defogger Grid
48	HTD MIR Fuse	15A	Outside Rearview Mirror – Driver (DL8 or DPN without AN3 or DL3), Outside Rearview Mirror – Passenger (DL8 or DPN without AN3 or DL3)
49	SEO B1 Fuse	15A	Auxiliary Body Control Module (XBCM) (EXP), Power Take Off – (PTO) Module, Run Relay (TP2), Security Indicator Lamp, Vehicle Inclination Sensor, Vehicle Shock Sensor
50	LTR Fuse	20A	Accessory Power Outlet - I/P 1, Data Link Connector (DLC)
51	SEO/ALC Fuse	10A	Not Used
52	HVAC-IGN Fuse	10A	Air Temperature Actuator (C67), Air Temperature Actuator – Left (CJ2), Air Temperature Actuator – Right (CJ2), Mode Actuator, Recirculation Actuator (C67 or CJ2)
53	ECM-IGN Fuse	15A	Engine Control Module (ECM)
54	ALC/COMP Fuse	40A	Not Used
55	HEAVY DUTY ABS Fuse	60A	Electronic Brake Control Module (EBCM)
56	ABS - 1 Fuse	40A	Electronic Brake Control Module (EBCM)
57	STRTR Fuse	40A	Starter
58	STUD-2 Fuse	30A	Blunt Cut Wire, Integrated Trailer Brake Control Relay (JL1)
59	LBEC1 Fuse	60A	BCM Fuse, COOLED SEATS Fuse, CTSY Fuse, DDM Fuse, DIM Fuse, DSM Fuse, PWR MIR Fuse, REAR HVAC Fuse, RT STOP TRN Fuse, WSW PUMP Fuse
60	ELEC RUN BOARD Fuse	30A	Not Used
61	WSW/HTR Fuse	60A	Not Used
62	TREC Fuse	30A	Transfer Case Encoder Motor (NQH), Transfer Case Shift Control Module (NQF or NQH)
63	STUD-1 Fuse	40A	Trailer Wiring
64	MBEC1 Fuse	60A	DRIVER SEAT 2 Circuit Breaker, PASS SEAT 1 Circuit Breaker, PWR REAR WNDW Circuit Breaker, RT DOORS Circuit Breaker
65	HVAC BLWR Fuse	40A	Blower Motor Control Module
66	LGM Fuse	30A	Not Used
67	LBEC2 Fuse	60A	AUX PWR Fuse, AUX PWR 2 Fuse, INFO Fuse, IS LPS Fuse, LOCK/UNLCOK PCB Relay, LT DR Circuit Breaker, LT STOP TRN Fuse, OBS DET Fuse, PDM Fuse, REAR SEAT Fuse, REAR SEAT ENT Fuse, REAR WPR Fuse, STOP LAMPS Fuse

(continued on next page)

Fuse Block - Underhood Label Usage - Diesel (cont'd)

Pin	Wire	Circuit	Function
68	FAN Fuse	10A	FAN RLY Relay
--	A/C CMPRSR Relay	--	A/C CMPRSR Fuse
--	FAN Relay	--	Engine Cooling Fan
--	FOG LAMP Relay	--	FOG LAMP Fuse
--	FUEL PMP Relay	--	FUEL PUMP Fuse
--	HDLP LO/HID Relay	--	DRL 2 Fuse, LO HDLP – LT Fuse, LO HDLP – RT Fuse
--	PRK LAMP Relay	--	LT PRK Fuse, RT PRK Fuse, TRLR PRK Fuse
--	PWR/TRN Relay	--	DSL ECM Fuse, ECM/THROT Fuse, ENG Fuse, FUEL HTR Fuse
--	REAR DEFOG Relay	--	HTD MIR Fuse, REAR DEFOG Fuse
--	RUN/CRNK Relay	--	AIRBAG IGN Fuse, AUX HVAC-IGN Fuse, HVAC-IGN Fuse, ECM-IGN Fuse, MISC IGN Fuse, SEO/ALC Fuse, TRANS IGN 1 Fuse
--	STRTR Relay	--	STRTR Fuse
Note: Relays listed below are non-serviceable Printed Circuit Board (PCB) relays and are internal to the block.			
--	BCK/UP LAMP PCB Relay	--	TRLR BCK/UP Fuse, VEH BCK/UP Fuse
--	CHMSL	--	CHMSL Fuse
--	DRL PCB Relay	--	DRL Fuse

Pin	Wire	Circuit	Function
--	FRT WASH PCB Relay	--	FRT WASH Fuse
--	HI BEAM PCB Relay	--	HI HDLP-LT Fuse, HI HDLP-RT Fuse
--	HORN PCB Relay	--	HORN Fuse
--	L/GATE PCB Relay	--	L/GATE RELSE Fuse
--	LOCK PCB Relay	--	LCK 2 Fuse (YE9)
--	LOCK/UN-LOCK PCB Relay	--	LCK 1 Fuse, LCK 2 Fuse, UNLCK 1 Fuse, UNLCK 2 Fuse (AU3 without YE9)
--	REAR WASH PCB Relay	--	REAR WASH Fuse
--	TRLR LT STOP/TRUN PCB Relay	--	TRLR STOP LT Fuse
--	TRLR RT STOP/TURN PCB Relay	--	TRLR STOP RT Fuse
--	UNLOCK PCB Relay	--	DRV UNLCK Fuse, UNLCK 1 Fuse, UNLCK 2 Fuse
--	WIPER CON-TROL PCB Relay	--	Windshield Wiper Motor
--	WIPER SPEED PCB Relay	--	Windshield Wiper Motor
Note: Items listed below are Wiper System diagnostic testing points.			
--	TP92	--	Wiper High Speed Test Point
--	TP95	--	Wiper Low Speed Test Point

Fuse Block - Underhood Label Usage - Gas

Pin	Wire	Circuit	Function
1	TRLR STOP RT Fuse	10A	Auxilliary Body Control Module (XBCM) (EXP), Trailer Wiring
2	ESC/ALC EXH Fuse	30A	Not Used
3	TRLR STOP LT Fuse	10A	Auxilliary Body Control Module (XBCM) (EXP), Trailer Wiring
4	ENG Fuse	15A	Central Sequential Fuel Injection (Central SFI) (LU3), Evaporative Emissions (EVAP) Canister Purge Solenoid Valve (except LU3), FAN LO Relay (HP2), Mass Air Flow (MAF)/ Intake Air Temperature (IAT) Sensor (except LU3), Valve Lifter Oil Manifold (VLOM) Assembly (L96, LC9, LMG or LZ1)
5	ECM/THROT CONT Fuse	15A	Engine Control Module (ECM), Evaporative Emission (EVAP) Canister Purse Solenoid Valve (LU3), Mass Air Flow (MAF)/ Intake Air Temperature (IAT) Sensor (LU3)
6	ITBC Fuse	15A	Integrated Trailer Brake Control Module (JL1)
7	FRT WASH Fuse	15A	Windshield Washer Fluid Pump
8	O2-B SNSR Fuse	10A	Heated Oxygen Sensor (HO2S) Bank 1 Sensor 2, Heated Oxygen Sensor (HO2S) Bank 2 Sensor 2
9	ABS 2 Fuse	25A	Electronic Brake Control Module (EBCM)
10	TRLR BCK/UP Fuse	10A	Backup Alarm (8S3), Trailer Wiring
11	LO HDLP-LT Fuse	20A	Headlamp - Left Low Beam
12	ECM-BATT Fuse	10A	Engine Control Module (ECM)
13	INJ-B Fuse	20A	Fuel Injector 2, Fuel Injector 4, Fuel Injector 6, Fuel Injector 8, Ignition Coil 2, Ignition Coil 4, Ignition Coil 6, Ignition Coil 8 (except LU3)
14	TCM-BATT Fuse	15A	Automatic Transmission (M99, MYC or MYD), Evaporative Emission (EVAP) Canister Vent Solenoid Valve, Transmission Control Module (TCM) (M30)
15	VEH BCK/UP Fuse	10A	Backup Lamp - Left, Backup Lamp - Right
16	LO HDLP-RT Fuse	20A	Headlamp - Right Low Beam
17	A/C CMPRSR Fuse	10A	A/C Compressor Clutch
18	O2-A SNSR Fuse	10A	Heated Oxygen Sensor (HO2S) Bank 1 Sensor 1, Heated Oxygen Sensor (HO2S) Bank 2 Sensor 1

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Fuse Block - Underhood Label Usage - Gas (cont'd)

Pin	Wire	Circuit	Function
19	TRANS IGN 1 Fuse	15A	Transmission Control Module (TCM) (M30), 1–2 Shift Solenoid (SS) Valve, 2–3 Shift Solenoid (SS) Valve, 3–2 Shift Solenoid (SS) Valve (M30), Torque Converter Clutch (TCC) Solenoid Valve (M30), Torque Converter Clutch Pulse Width Modulation (TCC PWM) Solenoid Valve, Input Speed Sensor (ISS), Front Drive Axle Actuator, Automatic Transmission (MYC, MYD or M99), Drive Motor Generator Power inverter module (HP2)
20	FUEL PUMP Fuse	25A	Fuel Pump and Sender Assembly - Front, Fuel Pump
21	FSCM Fuse	25A	Fuel System Control Module (FSCM) (Gas except LU3 or LY6)
22	HDLP WASH Fuse	20A	Not Used
23	REAR WASH Fuse	15A	Not Used
24	INJ-A Fuse	20A	Fuel Injector 1 (except LU3), Fuel Injector 3 (except LU3), Fuel Injector 5 (except LU3), Fuel Injector 7 (except LU3), Ignition Coil 1 (except LU3), Ignition Coil 3 (except LU3), Ignition Coil 5 (except LU3), Ignition Coil 7 (except LU3), Ignition Control Module (ICM) (LU3)
25	TRLR PRK Fuse	15A	Trailer Wiring
26	LT PRK Fuse	15A	Clearance Lamp (U01), Clearance Lamp – Left Front (R05), Clearance Lamp – Left Rear (R05), License Lamp – Left, Park/Turn Signal Lamp – Left Front Lower, Park/Turn Signal Lamp – Left Front Upper, Roof Marker Lamp – Left (U01), Roof Marker Lamp – Right (U01), Side Marker Lamp – Left Front (Z88), Side Marker Lamp – Left Rear (Z88), Tail/Stop and Turn Signal Lamp – Lower Left, Tail/Stop and Turn Signal Lamp – Upper Left
27	RT PRK Fuse	15A	Clearance Lamp – Right Front (R05), Clearance Lamp – Right Rear (R05), License Lamp – Right, Park/Turn Signal Lamp – Right Front Upper, Park/Turn Signal Lamp – Right Front Lower, Side Marker Lamp - Righ Front (Z88), Side Marker Lamp – Right Rear (Z88), Marker Lamp – Tailgate, Tail/Stop and Turn Signal Lamp – Lower Right, Tail/Stop and Turn Signal Lamp – Upper Right
28	FOG LAMP Fuse	15A	Fog Lamp - Left Front (T96), Fog Lamp - Right Front (T96)
29	HORN Fuse	15A	Horn - Left, Horn - Right (7Z1 or YE9)
30	HI HEAD-LAMP-RT Fuse	10A	Headlamp - Right High Beam
31	DRL Fuse	15A	DRL 2 Fuse

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Fuse Block - Underhood Label Usage - Gas (cont'd)

Pin	Wire	Circuit	Function
32	HI HEAD-LAMP-LT Fuse	10A	Headlamp - Left High Beam
33	DRL 2 Fuse	15A	LO HDLP - LT Fuse, LO HDLP - RT Fuse
34	S/ROOF Fuse	30A	Roof Beacon Relay (TRW), Sunroof Module (CF5)
35	DLIS Fuse	2A	Ignition Switch, Theft Deterrent Module (TDM)
36	FRT WPR Fuse	25A	WIPER CONTROL PCB Relay
37	SEO B2 Fuse	30A	Emergency Vehicle Roof Lamp Relay (5Y0)
38	EAP Fuse	15A	ELECTRONIC ADJUSTABLE PEDALS PCB Relay, PARK ENABLE PCB Relay
39	HVAC BATT Fuse	10A	HVAC Control Module
40	AIRBAG IGN Fuse	10A	Inflatable Restraint I/P Module Disable Switch (C99), Inflatable Restraint I/P Module Indicator, Inflatable Restraint Sensing and Diagnostic Module (SDM)
41	AMP Fuse	30A	Audio Amplifier (UQA)
42	RDO Fuse	15A	Chime Module (UL5), Digital Radio Receiver (U2K), Radio, Rear Seat Audio (RSA) Control (UK6)
43	MISC IGN Fuse	10A	Auxiliary Body Control Module (XBCM) (EXP), Serial Data Gateway (SDG) Module (HP2), Stop Lamp Switch, Trailer Brake Control Module (JL1), Transfer Case Shift Control Module (NQF or NQH)
44	L/GATE RELSE Fuse	15A	Not Used
45	AIRBAG BATT Fuse	15A	Inflatable Restraint Passenger Presence System (PPS) Module, Inflatable Restraint Sensing and Diagnostic Module (SDM), Inflatable Restraint Vehicle Rollover Sensor (ASF)
46	IPC Fuse	10A	Body Control Module (BCM), Instrument Panel Cluster (IPC)
47	EXP/PTO Fuse	15A	Auxiliary Body Control Module (XBCM) (EXP), Power Take Off Relay (PTO)
48	AUX HVAC-IGN Fuse	10A	Heated Steering Wheel Module Control (KA9), Inside Rearview Mirror (ISRVM), Instrument Panel Cluster (IPC)
49	CHMSL Fuse	15A	Center High Mounted Stop Lamp (CHMSL)
50	REAR DEFOG Fuse	30A	Rear Window Defogger Grid
51	HTD MIR Fuse	15A	Outside Rearview Mirror – Driver (DL8 or DPN without AN3 or DL3), Outside Rearview Mirror – Passenger (DL8 or DPN without AN3 or DL3)
52	SEO B1 Fuse	15A	Auxiliary Body Control Module (XBCM) (EXP), Security Indicator Lamp, Vehicle Inclination Sensor, Vehicle Shock Sensor
53	LTR Fuse	20A	Accessory Power Outlet - I/P 1, Data Link Connector (DLC)

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Fuse Block - Underhood Label Usage - Gas (cont'd)

Pin	Wire	Circuit	Function
54	SEO/ALC Fuse	10A	Not Used
55	HVAC-IGN Fuse	10A	Air Temperature Actuator (C67), Air Temperature Actuator – Left (CJ2), Air Temperature Actuator – Right (CJ2), Mode Actuator, Recirculation Actuator (C67 or CJ2)
56	ECM-IGN Fuse	15A	Electronic Brake Control Module (EBCM) (HP2), Engine Control Module (ECM),), Fuel Pump Flow Control Module (Gas except L96 or LU3), Fuel Pump Relay – Secondary (L96 with N2N)
57	FAN-1 Fuse	40A	FAN LO Relay
58	ALC/COMP Fuse	40A	Not Used
59	HEAVY DUTY ABS Fuse	60A	Electronic Brake Control Module (EBCM)
60	FAN-2 Fuse	40A	FAN HI Relay
61	ABS-1 Fuse	40A	Electronic Brake Control Module (EBCM)
62	STRTR Fuse	40A	Starter
63	STUD-2 Fuse	30A	Blunt Cut Wire, Integrated Trailer Brake Control (JL1)
64	LBEC1 Fuse	60A	BCM Fuse, COOLED SEATS Fuse, CTSY Fuse, DDM Fuse, DIM Fuse, DSM Fuse, PWR MIR Fuse, REAR HVAC Fuse, RT STOP TRN Fuse, WSW PUMP Fuse
65	ELEC RUN BOARD Fuse	30A	Not Used
66	WSW/HTR Fuse	60A	Not Used
67	TREC Fuse	30A	Transfer Case Encoder Motor (NQH), Transfer Case Shift Control Module (NQF or NQH)
68	STUD-1 Fuse	40A	Trailer Wiring
69	MBEC1 Fuse	60A	DRIVER SEAT 2 Circuit Breaker, PASS SEAT 1 Circuit Breaker, PWR REAR WNDW Circuit Breaker, RT DOORS Circuit Breaker
70	HVAC BLWR Fuse	40A	Blower Motor Control Module
71	LGM Fuse	30A	Not Used
72	LBEC2 Fuse	60A	AUX PWR Fuse, AUX PWR 2 Fuse, INFO Fuse, IS LPS Fuse, LOCK/UNLCOK PCB Relay, LT DR Circuit Breaker, LT STOP TRN Fuse, OBS DET Fuse, PDM Fuse, REAR SEAT Fuse, REAR SEAT ENT Fuse, REAR WPR Fuse, STOP LAMPS Fuse
--	A/C CMPRSR Relay	--	A/C CMPRSR Fuse
--	FAN CNTRL Relay	--	Cooling Fan Control
--	FAN HI Relay	--	Cooling Fan - Right
--	FAN LO Relay	--	Cooling Fan - Left
--	FOG LAMP Relay	--	FOG LAMP Fuse
--	FUEL PMP Relay	--	FUEL PUMP Fuse

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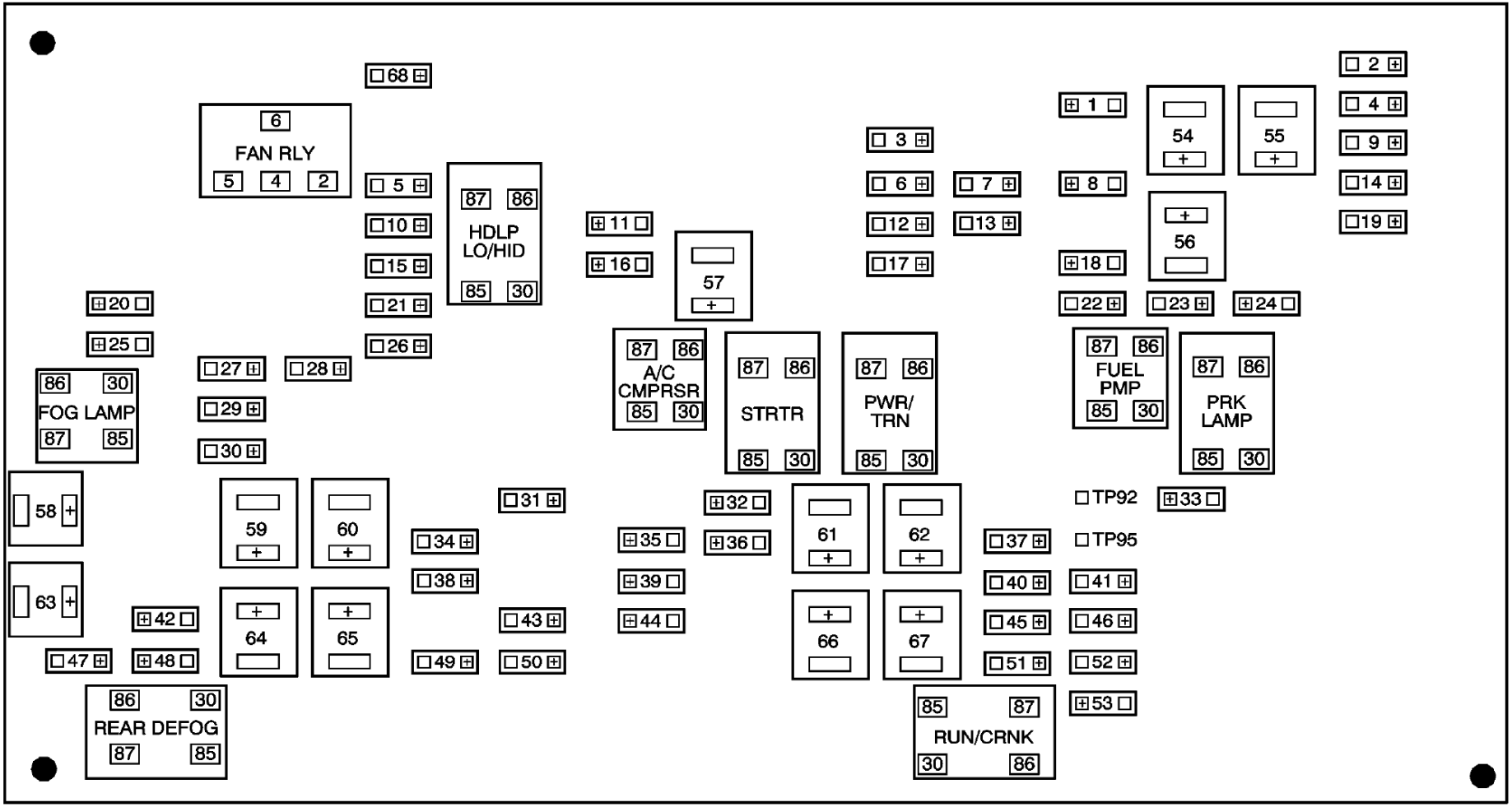
Fuse Block - Underhood Label Usage - Gas (cont'd)

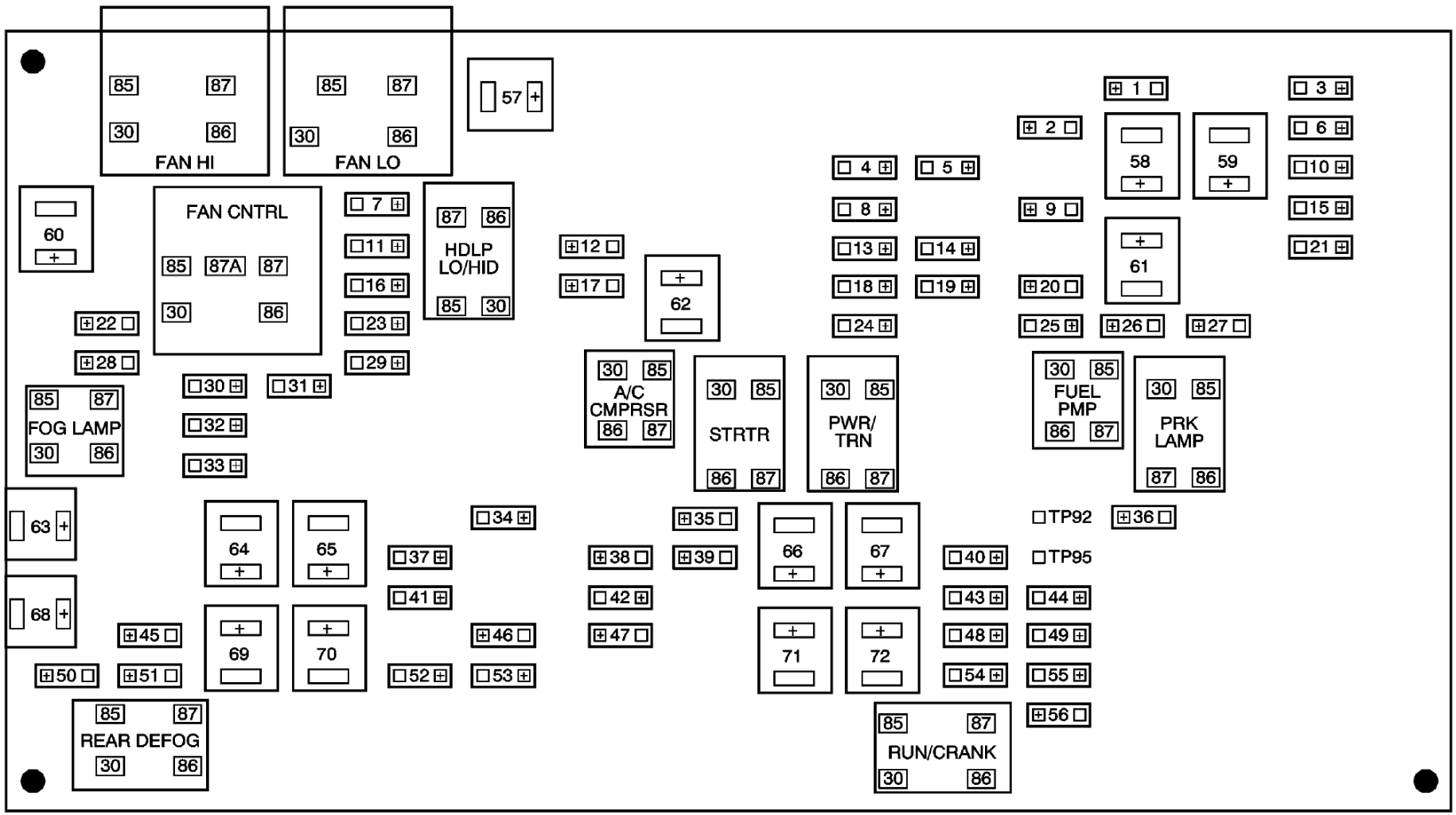
Pin	Wire	Circuit	Function
--	HDLP LO/HID Relay	--	DRL 2 Fuse, LO HDLP – LT Fuse, LO HDLP – RT Fuse
--	PRK LAMP Relay	--	LT PRK Fuse, RT PRK Fuse, TRLR PRK Fuse
--	PWR/TRN Relay	--	ECM/THROT CONT Fuse, ENG Fuse, FAN CNRTL PCB Relay, FAN HI PCB Relay, FAN LO PCB Relay, INJ-A Fuse, INJ-B Fuse, O2-A SNSR Fuse, O2-B SNSR Fuse
--	REAR DEFOG Relay	--	HTD MIR Fuse, REAR DEFOG Fuse
--	RUN/CRNK Relay	--	AIRBAG IGN Fuse, AUX HVAC-IGN Fuse, ECM-IGN Fuse, HVAC-IGN Fuse, MISC IGN Fuse, SEO/ALC Fuse, TRANS IGN 1 Fuse
--	STRTR Relay	--	STRTR Fuse
Note: Relays listed below are non-serviceable Printed Circuit Board (PCB) relays and are internal to the block.			
--	BCK/UP LAMP PCB Relay	--	TRLR BCK/UP Fuse, VEH BCK/UP Fuse
--	CHMSL Relay	--	CHMSL Fuse
--	DRL PCB Relay	--	DRL Fuse
--	FRT WASH PCB Relay	--	FRT WASH Fuse
--	HI BEAM PCB Relay	--	HI HDLP – LT Fuse, HI HDLP – RT Fuse

Pin	Wire	Circuit	Function
--	HORN PCB Relay	--	HORN Fuse
--	L/GATE PCB Relay	--	L/GATE RELSE Fuse
--	LOCK PCB Relay	--	LCK 2 Fuse (YE9)
--	LOCK/UN-LOCK PCB Relay	--	LCK 1 Fuse, LCK 2 Fuse, UNLCK 1 Fuse, UNLCK 2 Fuse (AU3 without YE9)
--	REAR WASH PCB Relay	--	REAR WASH Fuse
--	TRLR LT STOP/TURN PCB Relay	--	TRLR STOP LT Fuse
--	TRLR RT STOP/TURN PCB Relay	--	TRLR STOP RT Fuse
--	UNLOCK PCB Relay	--	DRV UNLCK Fuse, UNLCK 1 Fuse, UNLCK 2 Fuse
--	WIPER CON-TROL PCB Relay	--	Windshield Wiper Motor
--	WIPER SPEED PCB Relay	--	Windshield Wiper Motor
Note: Items listed below are Wiper System diagnostic testing points.			
--	TP92	--	Wiper High Speed Test Point
--	TP95	--	Wiper Low Speed Test Point

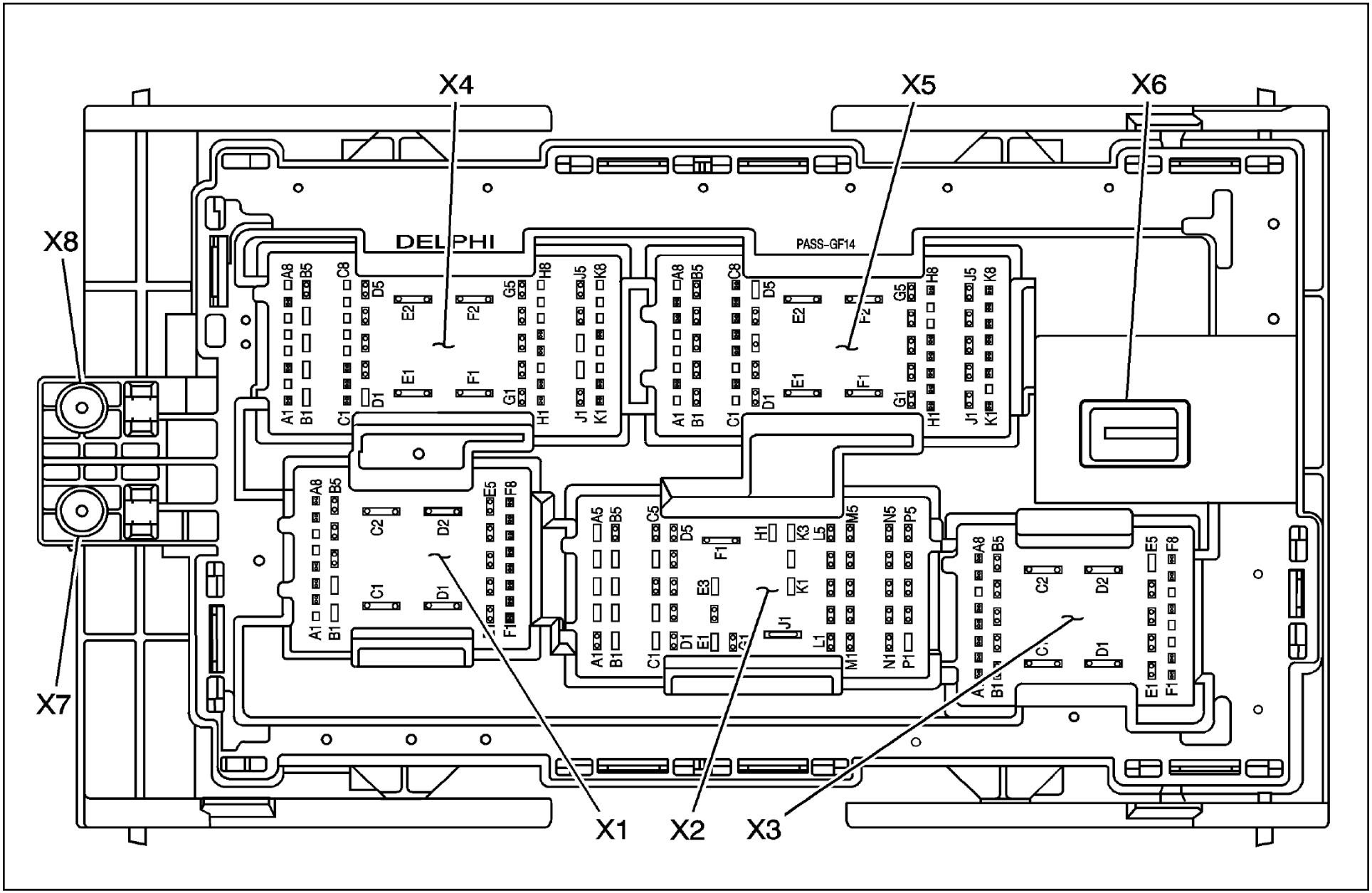
Fuse Block - Underhood Top View - Diesel



Fuse Block - Underhood Top View - Gas



Fuse Block - Underhood Bottom View



Fuse Block - Underhood X1

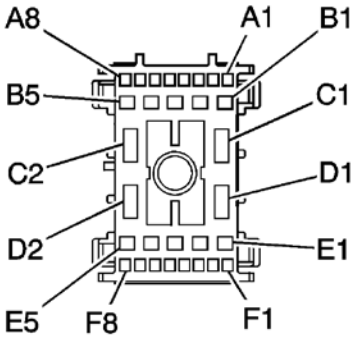
Connector Part Information

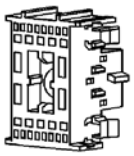
Harness Type:
Forward Lamp

OEM Connector: 13513343

Service Connector: 19115674

Description: 30-Way F
GT 150 280 Metri-Pack
Series (GY)





Terminal Part Information

Pins: A1, A2, A4

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-2A (GY)

Terminal/Tray: 15496302/5

Core/Insulation Crimp: 2/A

Pins: A3, A7, A8, F5, F8

Terminated Lead: 13575790

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-2A (GY)

Terminal/Tray: 15496302/5

Core/Insulation Crimp: E/A

Pins: B1, B3, E1, E2, E3, E5

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 13525970/4

Core/Insulation Crimp: Pins: B1, B3, E1, E5 – E/A

Core/Insulation Crimp: Pins: E2, E3 – 2/A

Pins: B5

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 13525969/4

Core/Insulation Crimp: 4/4

Pins: C1, C2, D1, D2

Terminated Lead: 13575718

Release Tool: J-38125-558

Diagnostic Test Probe: J-35616-44 (YE)

Terminal/Tray: 12110127/19

Core/Insulation Crimp: F/G

Pin	Wire	Circuit	Function
A1	0.8 BK	250	Ground
A2	0.8 L-BU/WH	1314	Left Front Turn Signal Lamp Supply Voltage
A3	0.5 D-BU	545	DRL Supply Voltage (T61)
A4	0.8 D-BU/WH	1315	Right Front Turn Signal Lamp Supply Voltage
A5-A6	--	--	Not Used
A7	0.5 L-GN/BK	311	Right Headlamp High Beam Supply Voltage
A8	0.5 D-GN/WH	711	Left Headlamp High Beam Supply Voltage
B1	0.5 WH--	2368	Cooling Fan Control Signal (LMM)
B2	--	--	Not Used
B3	0.5 D-BU	545	DRL Supply Voltage (T61)
B4	--	--	Not Used

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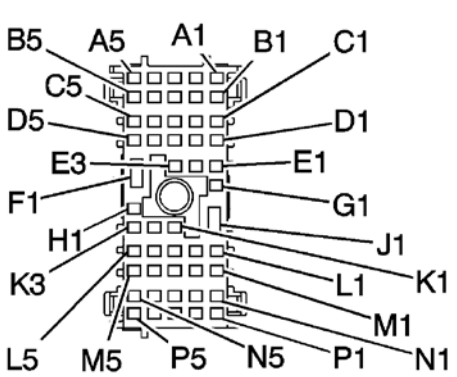
Fuse Block - Underhood X1 (cont'd)

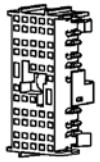
Pin	Wire	Circuit	Function
B5	0.8 PU	2234	Front Fog Lamp Supply Voltage (T96)
	0.8 PU	2234	Front Fog Lamp Supply Voltage (T96)
C1	5 GY	532	Cooling Fan Motor Supply Voltage (Gas except LY6 or HP2)
C2	5 YE	5358	Cooling Fan Motor Supply Voltage (Gas except LY6 or HP2)
D1	5 L-BU	409	Cooling Fan Motor Supply Voltage (Gas except LY6 or HP2)
D2	5 BK	150	Ground (10 Series except HP2)
E1	0.5 OG	228	Windshield Washer Pump Control

Pin	Wire	Circuit	Function
E2	0.8 YE	712	Left Headlamp Low Beam Supply Voltage
E3	0.8 TN/WH	312	Right Headlamp Low Beam Supply Voltage
E4	--	--	Not Used
E5	0.5 D-GN	29	Horn Control
	0.5 D-GN	29	Horn Control
F1-F4	--	--	Not Used
F5	0.5 BN	2609	Right Front Park Lamps Supply Voltage
F6-F7	--	--	Not Used
F8	0.5 BN	2509	Left Front Park Lamps Supply Voltage

Fuse Block - Underhood X2

Connector Part Information





Harness Type: Engine (Gas)

Harness Type: Engine Chassis (Diesel)

OEM Connector: 13513347

Service Connector: 19115659

Description: 50-Way F GT 280 Metri-Pack Series (BK)

Terminal Part Information

Pins: A1, A3, A5, B4, B5, C3, C5, D3, L1, L2, L4 (Gas), L5 (Diesel), M1,M2 (Diesel), N1, N3,N4, P1, P2, P3, P4, P5

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 13525970/4

Core/Insulation Crimp: E/A

Pins: D4, L5 (Gas), M2 (Gas except LU3)

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 13525970/4

Core/Insulation Crimp: 2/A

Pins: F1

Terminated Lead: 13575718

Release Tool: J-38125-558

Diagnostic Test Probe: J-35616-44 (YE)

Terminal/Tray: 12110127/19

Core/Insulation Crimp: F/G

Pins: L3 (Gas except LU3), M3, M4, M5

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 13525969/4

Core/Insulation Crimp: 4/4

Pins: L4 (Diesel), N5

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 13525969/4

Core/Insulation Crimp: F/D

Pin	Wire	Circuit	Function
A1	0.35 D-GN	335	Low Speed Cooling Fan Relay Control (Gas except HP2 or L96)
	0.5 WH/BK	2366	Cooling Fan Control Relay Speed Signal (Diesel)
A2	--	--	Not Used
A3	0.5 WH	2366	Cooling Fan Clutch Control (Diesel)

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Fuse Block - Underhood X2 (cont'd)

Pin	Wire	Circuit	Function
A4	--	--	Not Used
A5	0.5 RD/WH	4540	Battery Positive Voltage (TP2)
B1-B3	--	--	Not Used
B4	0.5 OG	300	Ignition 3 Voltage (HP2 OR TP2)
B5	0.35 D-BU/ WH	473	High Speed Cooling Fan Relay Control (Gas except HP2 or L96)
C1-C2	--	--	Not Used
C3	0.35 D-GN/ WH	459	A/C Compressor Clutch Relay Control (Except HP2)
C4	--	--	Not Used
C5	0.5 YE/BK	625	Starter Enable Relay Control (Except HP2)
D1-D2	--	--	Not Used
D3	0.5 RD/WH	440	Battery Positive Voltage
D4	0.8 D-GN	59	A/C Compressor Clutch Supply Voltage (C67 or CJ2 except HP2)
D5	--	--	Not Used
E1-E3	--	--	Not Used
F1	3 PU	6	Starter Solenoid Crank Voltage (Except HP2)
G1	--	--	Not Used
H1	--	--	Not Used
J1	--	--	Not Used
K1-K3	--	--	Not Used
L1	0.5 PK	1839	Ignition 1 Voltage (HP2, L20, L96, LC9 or LMG)
	0.5 PK	1839	Ignition 1 Voltage (HP2)
L2	0.5 PK/BK	1539	Ignition 1 Voltage (Gas)
	0.5 PK/BK	1539	Ignition 1 Voltage (Gas)
L3	0.8 PK/WH	1239	Ignition 1 Voltage (Gas except LU3)
	0.8 PK/WH	1239	Ignition 1 Voltage (Gas except LU3)
L4	0.5 PK	539	Ignition 1 Voltage (Gas)
	0.5 PK	539	Ignition 1 Voltage (Gas)
	3 PK/BK	1439	Ignition 1 Voltage (Diesel)
L5	1 PK	1039	Ignition 1 Voltage (Gas)
	0.5 PK	1339	Ignition 1 Voltage (Diesel)
	0.5 PK	1339	Ignition1 Voltage (Diesel)
M1	0.5 PK	1839	Ignition 1 Voltage (Gas)
	0.5 PK	1839	Ignition 1 Voltage (Gas except LU3)
M2	1 PK	1239	Ignition 1 Voltage (Gas except LU3)
	0.5 PK	1839	Ignition 1 Voltage (Diesel)
M3	0.8 PK	1239	Ignition 1 Voltage (Gas except LU3)
	0.8 PK	1239	Ignition 1 Voltage (Gas except LU3)
M4	0.8 PK/BK	1039	Ignition 1 Voltage (Gas except LU3)
	0.8 PK/BK	1039	Ignition 1 Voltage (Gas except LU3)

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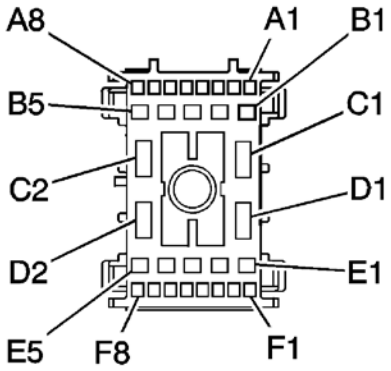
Fuse Block - Underhood X2 (cont'd)

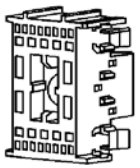
Pin	Wire	Circuit	Function
M5	0.8 PK	1039	Ignition 1 Voltage (Gas except LU3)
	0.8 PK	1039	Ignition 1 Voltage (Gas except LU3)
N1	0.5 PK	1339	Ignition 1 Voltage (Gas)
N2	--	--	Not Used
N3	0.5 RD/WH	1840	Battery Positive Voltage
	0.5 RD/WH	1840	Battery Positive Voltage (MW7)
N4	0.5 PK/WH	2139	Ignition 1 Voltage
	0.5 PK/WH	2139	Ignition 1 Voltage (except NQF, NQG or NQH, and NQG or NQH with MYD)
N5	2 BK	550	Ground

Pin	Wire	Circuit	Function
P1	0.5 PK/BK	1339	Ignition 1 Voltage (LU3 or HP2)
	0.5 PK	1339	Ignition 1 Voltage (LU3)
P2	0.35 YE	5991	Powertrain Relay Coil Control
P3	0.5 L-BU/WH	6311	Cruise/ETC/TCC Brake Signal
	0.5 L-BU/WH	6311	Cruise/ETC/TCC Brake Signal (Gas except HP2 or Diesel with PTO)
P4	0.5 D-GN/WH	465	Fuel Pump Relay Control (L96, LU3, or Diesel with 31 Series and with N2N)
P5	0.5 PK	439	Ignition 1 Voltage

Fuse Block - Underhood X3

Connector Part Information





Harness Type: Chassis

OEM Connector: 13513342

Service Connector: 19115657

Description: 30-Way F GT 150 280 Metri-Pack Series (BK)

Terminal Part Information

Pins: A1-A2, A7, F1-F2, F5 (L96 without NQZ), F7

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-2A (GY)

Terminal/Tray: 15496302/5

Core/Insulation Crimp: 2/A

Pins: A3, A5, F5 (Gas except LY6 with NQZ)

Terminated Lead: 13575790

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-2A (GY)

Terminal/Tray: 15496302/5

Core/Insulation Crimp: E/A

Pins: B3, B5, E1 (JL1 or LY6), E4

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 13525969/4

Core/Insulation Crimp: Pins: B3, B5, E1 (JL1 or LY6), E4 (Diesel with JL1) - 4/4

Core/Insulation Crimp: Pin: E4 (Gas without JL1 except LU3) - F/D

Pins: B4, E1 (Diesel), E2, E3

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 13525970/4

Core/Insulation Crimp: 2/A

Pins: C2, D1

Terminated Lead: 13575718

Release Tool: J-38125-558

Diagnostic Test Probe: J-35616-44 (YE)

Terminal/Tray: 12110127/19

Core/Insulation Crimp: F/G

Pin	Wire	Circuit	Function
A1	0.8 D-GN	19	Right Rear Stop/Turn Lamp Supply Voltage
A2	0.8 YE	18	Left Rear Stop/Turn Lamp Supply Voltage
A3	0.5 D-BU	38	Backup Lamp Relay Control (UVC)

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Fuse Block - Underhood X3 (cont'd)

Pin	Wire	Circuit	Function
A4	--	--	Not Used
A5	0.5 RD/WH	1840	Battery Positive Voltage (Gas)
A6	--	--	Not Used
A7	0.8 BN	2509	Left Rear Park Lamps Supply Voltage
A8	--	--	Not Used
B1-B2	--	--	Not Used
B3	2 RD	1640	Battery Positive Voltage (JL4, JF3 or JF7 with 10 Series)
B4	1 BN	2109	Trailer Park Lamps Supply Voltage (except MEX or EXP)
	0.8 BN	2109	Trailer Park Lamps Supply Voltage (EXP)
B5	2 GY	120	Fuel Pump Supply Voltage (LU3, LMG, LC9, LY6 or Diesel with 31 Series and without NQZ)
C1	--	--	Not Used
C2	3 RD/BK	442	Battery Positive Voltage (except MEX)
D1	5 RD/BK	1742	Battery Positive Voltage
D2	--	--	Not Used
E1	2 RD/WH	4340	Battery Positive Voltage (JL1 or LY6)
	0.8 D-GN	1619	Trailer Right Rear Turn/Stop Lamp Supply Voltage (Diesel)

Pin	Wire	Circuit	Function
E2	1 L-GN	1624	Trailer Backup Lamps Supply Voltage (except MEX or EXP)
E3	0.8 L-GN	24	Backup Lamp Supply Voltage
E4	3 RD/WH	1940	Battery Positive Voltage (Gas without JL1 except LU3)
	2 RD/WH	4340	Battery Positive Voltage (Diesel with JL1)
E5	--	--	Not Used
F1	0.35 YE	1618	Trailer Left Rear Turn/Stop Lamp Supply Voltage (except MEX, EXP or HP2)
	0.8 YE	1618	Trailer Left Rear Turn/Stop Lamp Supply Voltage (EXP or HP2)
F2	0.8 D-GN	1619	Trailer Right Rear Turn/Stop Lamp Supply Voltage (Gas with EXP or Gas without MEX or EXP)
F3-F4	--	--	Not Used
F5	0.5 PK	439	Ignition 1 Voltage (Gas except LY6 with NQZ)
	0.8 PK	439	Ignition 1 Voltage (L96 without NQZ)
F6	--	--	Not Used
F7	0.8 BN	2609	Right Rear Park Lamps Supply Voltage
F8	0.8 GY	5185	Right Trailer Park Lamp (EXP)

Fuse Block - Underhood X4

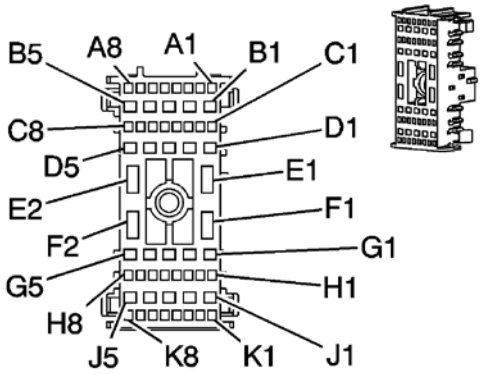
Connector Part Information

Harness Type:
Instrument Panel

OEM Connector: 13513329

Service Connector: 19115656

Description: 56-Way
F GT 150 280 Metri-Pack
Series (BK)



Terminal Part Information

Pins: A1, A3, A7, C1, C2, C3, H1, H4, K2

Terminated Lead: 13575790

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-2A (GY)

Terminal/Tray: 15496302/5

Core/Insulation Crimp: E/A

Pins: B5, G2, G3

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 13525969/4

Core/Insulation Crimp: F/D

Pins D4, D5, G1

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 13525970/4

Core/Insulation Crimp: E/A

Pins: C1, H5, K5

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-2A (GY)

Terminal/Tray: 15496302/5

Core/Insulation Crimp: 2/A

Pins: E1, E2, F2

Terminated Lead: 13575718

Release Tool: J-38125-558

Diagnostic Test Probe: J-35616-44 (YE)

Terminal/Tray: 12110127/19

Core/Insulation Crimp: F/G

Pins: G5

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 13525970/4

Core/Insulation Crimp: 2/A

Pin: J4

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 13525970/4

Core/Insulation Crimp: 2/A

Pins: J5

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 13525969/4

Core/Insulation Crimp: 4/4

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Fuse Block - Underhood X4 (cont'd)

Pin	Wire	Circuit	Function
A1	0.5 L-BU/WH	1314	Left Front Turn Signal Lamp Supply Voltage
A2	--	--	Not Used
A3	0.5 OG	2268	Windshield Washer Relay Control
A4-A6	--	--	Not Used
A7	0.35 WH	193	Rear Defog Relay Control (C49 or HP2)
A8	--	--	Not Used
B1-B4	--	--	Not Used
B5	3 PU	293	Rear Defog Element Supply Voltage (C49 or HP2)
C1	0.5 D-BU/WH	1315	Right Front Turn Signal Lamp Supply Voltage (except DL3, DPN or HP2)
	0.8 D-BU/WH	1315	Right Front Turn Signal Lamp Supply Voltage (DL3, DPN or HP2)
C2	0.35 D-GN/WH	1317	Fog Lamp Relay Control (T96 or HP2)
C3	0.35 TN/WH	1969	Headlamp High Beam Relay Control
C4-C8	--	--	Not Used
D1-D3	--	--	Not Used
D4	0.5 RD/WH	4440	Battery Positive Voltage
D5	0.5 OG	2267	Mirror Heating Element Supply Voltage (HP2, DL8 or DPN without AN3 or DL3)
E1	5 RD/BK	842	Battery Positive Voltage
E2	5 RD/BK	642	Battery Positive Voltage (YE9 or HP2)
F1	--	--	Not Used
F2	5 RD/BK	542	Battery Positive Voltage
G1	0.35 TN	28	Horn Relay Control
G2	3 RD/WH	2340	Battery Positive Voltage (except MEX)
G3	3 RD/WH	3740	Battery Positive Voltage (except MEX)
G4	--	--	Not Used
G5	0.8 RD/WH	4540	Battery Positive Voltage (except MEX)
H1	0.5 BN	2509	Left Right Park Lamps Supply Voltage (except MEX or 8S8)
H2-H3	--	--	Not Used
H4	0.35 L-GN/BK	592	DRL Relay Control (except MEX)
H5	1 D-GN	19	Right Rear Stop/Turn Lamp Supply Voltage
H6-H8	--	--	Not Used
J1	3 RD/WH	3140	Battery Positive Voltage (except MEX)
J2-J3	--	--	Not Used
J4	0.35 RD/WH	2840	Battery Positive Voltage
	0.35 RD/WH	2840	Battery Positive Voltage (except MEX)
J5	0.8 RD/WH	640	Battery Positive Voltage
	0.8 RD/WH	640	Battery Positive Voltage
K1	--	--	Not Used
K2	0.35 PK/WH	1970	Headlamp Low Beam Relay Control
K3-K4	--	--	Not Used
K5	1 YE	18	Left Rear Stop/Turn Lamp Supply Voltage
K6-K8	--	--	Not Used

Fuse Block - Underhood X5

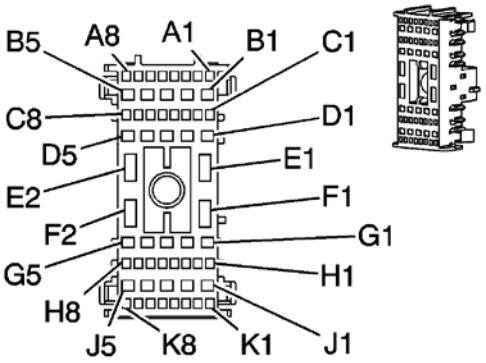
Connector Part Information

Harness Type:
Instrument Panel

OEM Connector: 13513345

Service Connector: 19115658

Description: 56-Way F
GT 150 280 Metri-Pack
Series (GY)



Terminal Part Information

Pins: A2, C4, C5, C8, H1, H3, H5, H8, K1, K3, K5, K6

Terminated Lead: 13575790

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-2A (GY)

Terminal/Tray: 15496302/5

Core/Insulation Crimp: E/A

Pins: B1, B3 (Y91, MEX or 8S8), G1, G4 (With MEX or except KA9), J1, J2

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 13525970/4

Core/Insulation Crimp: 2/A

Pin: B3 (except Y91, MEX or 8S8)

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 13525969/4

Core/Insulation Crimp: 4/4

Pins: F1, F2

Terminated Lead: 13575718

Release Tool: J-38125-558

Diagnostic Test Probe: J-35616-44 (YE)

Terminal/Tray: Pins: F1 (NQF or NQH), F2:12110127/19

Core/Insulation Crimp: Pins: F1 (NQF or NQH), F2: F/G

Terminal/Tray: Pin: F1 (NQH): 12092445/18

Core/Insulation Crimp: Pin: F1 (NQH): Not Available

Pin: B2, B4, D1, D2, G2, G3, G4 (DF5 or KA9), G5, J4, J5

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 13525970/4

Core/Insulation Crimp: E/A

Pin	Wire	Circuit	Function
A1	--	--	Not Used
A2	0.35 L-BU/WH	6311	Cruise/ETC/TCC Brake Signal
A3-A8	--	--	Not Used
B1	0.35 L-BU/WH	6311	TCC Brake Signal
	0.35 L-BU/WH	6311	TCC Brake Signal
B2	0.5 RD/WH	740	Battery Positive Voltage (YE9, Y91 or HP2)
B3	1 RD/WH	340	Battery Positive Voltage
	1 RD/WH	340	Battery Positive Voltage (except Y91, MEX or 8S8)
B4	0.5 RD/WH	2640	Battery Positive Voltage (PTO or EXP)

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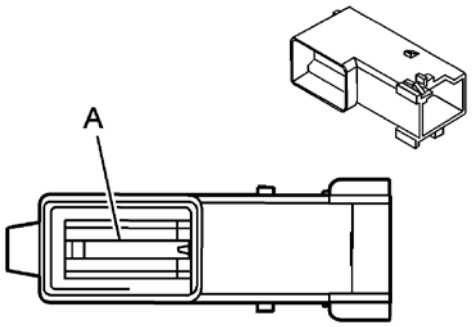
Fuse Block - Underhood X5 (cont'd)

Pin	Wire	Circuit	Function
B5	--	--	Not Used
C1-C3	--	--	Not Used
C4	0.35 OG	300	Ignition 3 Voltage
C5	0.35 OG	300	Ignition 3 Voltage
C6-C7	--	--	Not Used
C8	0.35 D-BU	45	Park Lamp Relay Supply Voltage
D1	0.35 RD/WH	540	Battery Positive Voltage
D2	0.35 RD/WH	3340	Battery Positive Voltage
D3-D5	--	--	Not Used
E1-E2	--	--	Not Used
F1	3 RD/BK	1342	Battery Positive Voltage (NQF or NQH)
	3 RD/BK	1342	Battery Positive Voltage (NQH)
F2	5 RD/BK	42	Battery Positive Voltage
G1	1 BK	550	Ground
G2	0.35 PK	1139	Ignition 1 Voltage
G3	0.35 PK	239	Ignition 1 Voltage
G4	0.35 PK	1639	Ignition 1 Voltage (DF5 or KA9)
	0.35 PK	1639	Ignition 1 Voltage (with MEX or except KA9)
G5	0.35 PK	739	Ignition 1 Voltage
H1	0.35 OG	5186	Left Trailer Turn Signal Lamp Control
H2	0.35 YE	1618	Trailer Left Rear Turn/Stop Lamp Supply Voltage (EXP)
H3	0.35 YE	5187	Right Trailer Turn Signal Lamp Control
H4	0.35 D-GN	1619	Trailer Right Rear Turn/Stop Lamp Supply Voltage (EXP)
H5	0.35 YE	5199	Run/Crank Relay Coil Control
H6-H7	--	--	Not Used
H8	0.35 D-BU	38	Backup Lamp Relay Control
J1	1 PU	92	Windshield Wiper Motor High Speed
J2	1 D-GN	95	Windshield Washer Switch Signal
J3	--	--	Not Used
J4	0.5 OG	1054	Stop Lamp Supply Voltage Signal
J5	0.35 PK	839	Ignition 1 Voltage
K1	0.35 TN	860	Front Windshield Wiper Switch High Signal Control
K2	--	--	Not Used
K3	0.35 GY	91	Windshield Wiper Switch Signal 2
K4	--	--	Not Used
K5	0.35 D-BU	38	Backup Lamp Relay Control (UVC)
K6	0.5 L-BU	1320	CHMSL Supply Voltage/Stop Lamp Supply Voltage
K7-K8	--	--	Not Used

Fuse Blocks - Underhood X6, X7 (except TP2), X7 (TP2), X8 (except JL1), X8 (JL1)

Fuse Block - Underhood X6
Connector Part Information



Harness:
Battery Positive

OEM Connector: 15488459

Service Connector:
Service by Harness
- See Part Catalog

Description: 1-Way F High Power Series (BK)

Terminal Part Information

Terminal/Tray: Service by Harness - See Parts Catalog

Core/Insulation Crimp: Not Available

Release Tool/Test Probe: Not Available

Pin	Wire Color	Circuit No.	Function
A	19 RD	2	Battery Positive Voltage

Fuse Block - Underhood X7 (except TP2)
Terminal Part Information

Harness Type: Chassis
Description: Ring Terminal
Terminated Lead: Pending
Release Tool: No Tool Reqd
Diagnostic Test Probe: No Tool Reqd
Terminal/Tray: 12103512/18
Core/Insulation Crimp: G/G

Pin	Wire	Circuit	Function
1	3 RD/BK	742	Battery Positive Voltage

Fuse Block - Underhood X7 (TP2)
Terminal Part Information

Harness Type: Auxiliary Battery Positive
Terminal: 12146912
Core/Insulation Crimp: Not Available
Description: Ring Terminal

Pin	Wire Color	Circuit No.	Function
1	0.8 RD/BK	742	Battery Positive Voltage

Fuse Block - Underhood X8 (except JL1)
Terminal Part Information

Harness Type: Instrument Panel
Terminal: 12103506
Core/Insulation Crimp: N/A
Description: Ring Battery Terminal

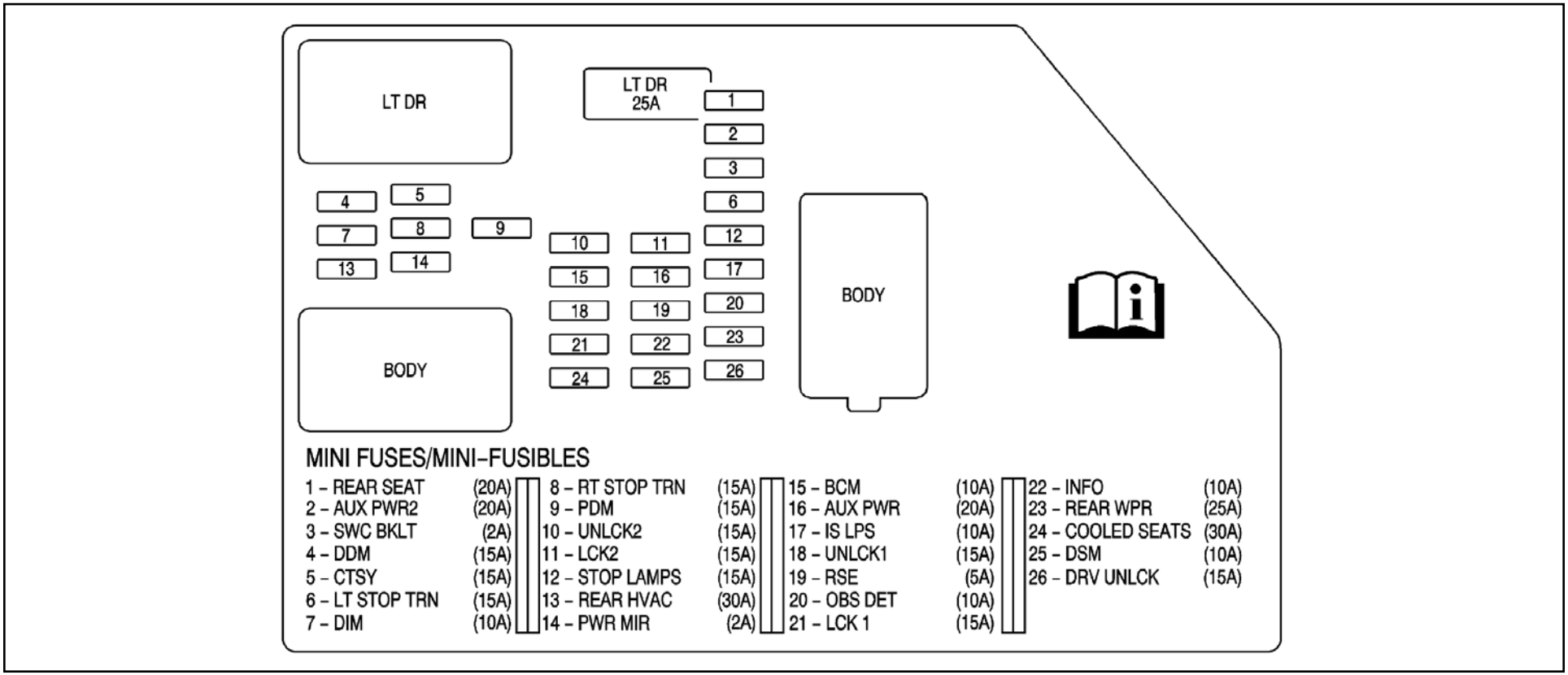
Pin	Wire Color	Circuit No.	Function
1	3 RD/BK	242	Battery Positive Voltage

Fuse Block - Underhood X8 (JL1)
Terminal Part Information

Harness Type: Chassis
Description: Ring Terminal
Terminated Lead: Pending
Release Tool: No Tool Reqd
Diagnostic Test Probe: No Tool Reqd
Terminal/Tray: 12103506/18
Core/Insulation Crimp: Not Available

Pin	Wire	Circuit	Function
1	3 RD/BK	242	Battery Positive Voltage

Fuse Block - I/P Label


LT DR
LT DR 25A
BODY
BODY
MINI FUSES/MINI–FUSIBLES
1 – REAR SEAT (20A)
2 – AUX PWR2 (20A)
3 – SWC BKLT (2A)
4 – DDM (15A)
5 – CTSY (15A)
6 – LT STOP TRN (15A)
7 – DIM (10A)
8 – RT STOP TRN (15A)
9 – PDM (15A)
10 – UNLCK2 (15A)
11 – LCK2 (15A)
12 – STOP LAMPS (15A)
13 – REAR HVAC (30A)
14 – PWR MIR (2A)
15 – BCM (10A)
16 – AUX PWR (20A)
17 – IS LPS (10A)
18 – UNLCK1 (15A)
19 – RSE (5A)
20 – OBS DET (10A)
21 – LCK 1 (15A)
22 – INFO (10A)
23 – REAR WPR (25A)
24 – COOLED SEATS (30A)
25 – DSM (10A)
26 – DRV UNLCK (15A)

Pin	Wire	Circuit	Function
1	REAR SEAT Fuse	20A	Not Used
2	AUX PWR2 Fuse	20A	Accessory Power Outlet - Center Console (D07 with UQ3), Accessory power Outlet - Center Console Compartment (D07 with UQ3), Accessory Power Outlet - Center Seat (AZ3)

Pin	Wire	Circuit	Function
3	SWC BKLT Fuse	2A	Steering Wheel Control Switch Assembly - Left, Steering Wheel Control Switch Assembly - Right
4	DDM Fuse	15A	Door Lock/Window Switch - Driver (AN3 or DL3)
5	CTSY Fuse	15A	Body Control Module (BCM)
6	LT STOP TRN Fuse	15A	Body Control Module (BCM) (except TZ0), Trailer Stop/Turn Relay (TZ0)

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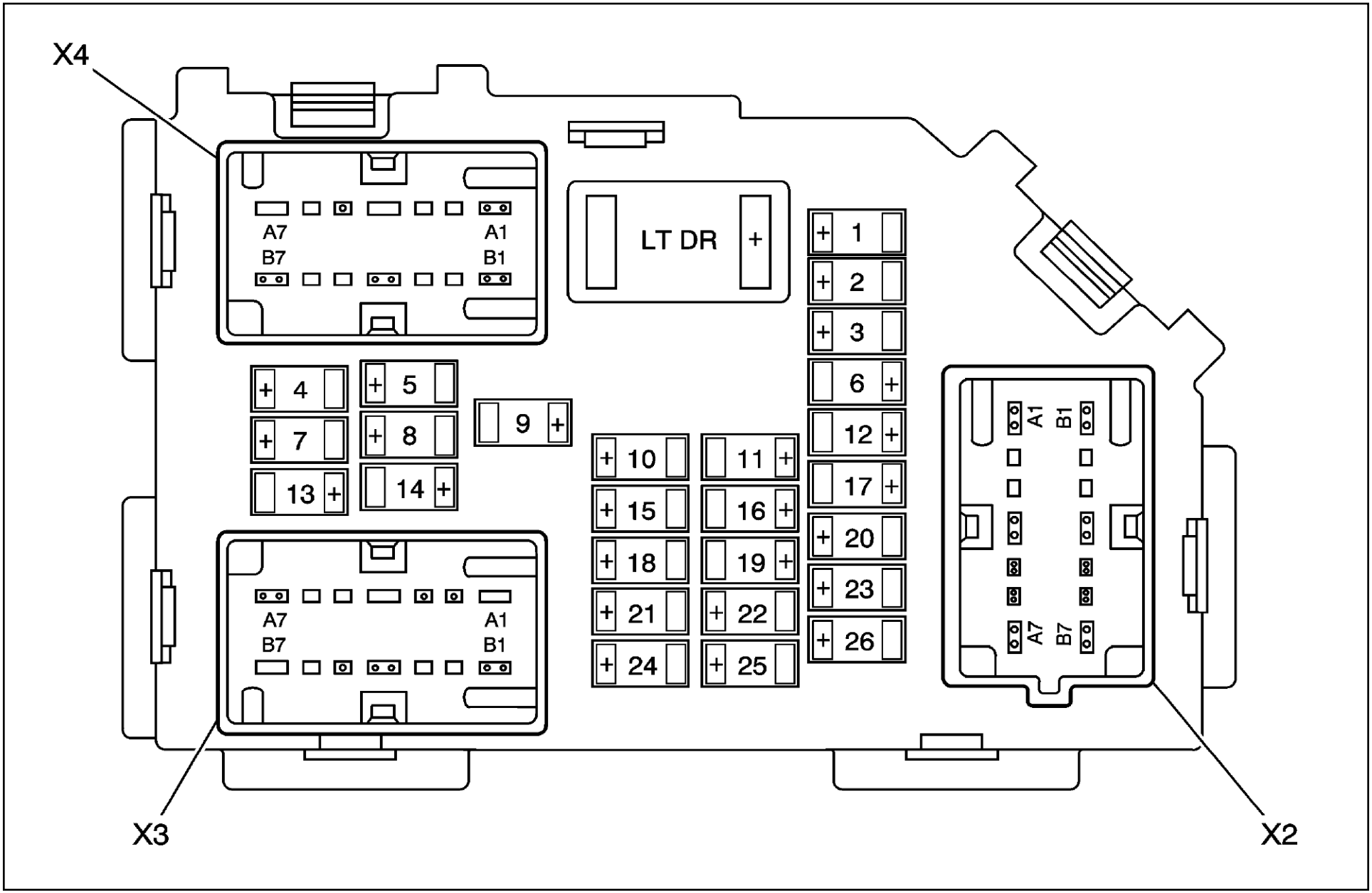
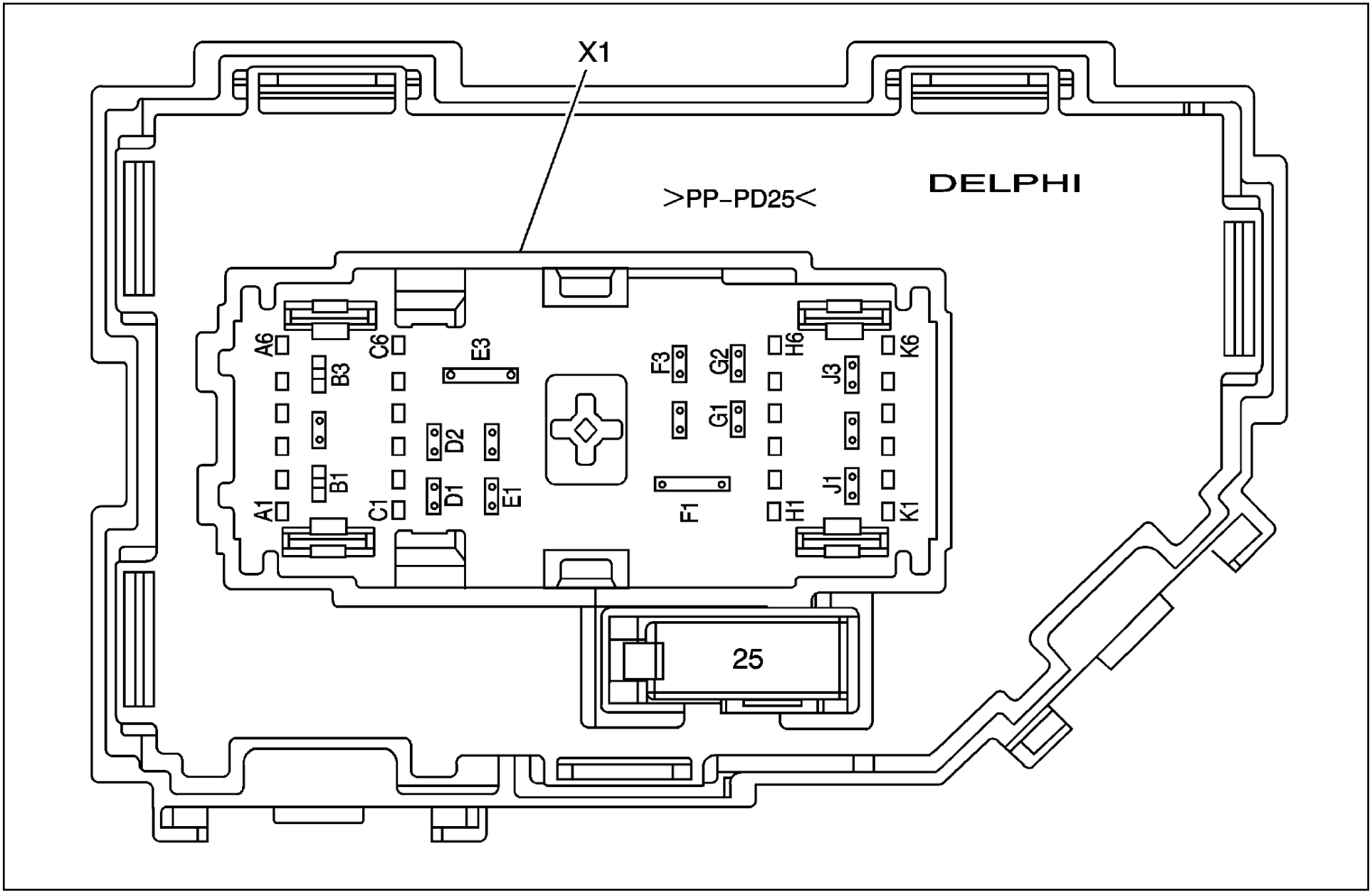
Fuse Block - I/P Label (cont'd)

Pin	Wire	Circuit	Function
7	DIM Fuse	10A	Body Control Module (BCM)
8	RT STOP TRN Fuse	15A	Body Control Module (BCM)
9	PDM Fuse	15A	Garage Door Opener (GDO) (UG1), Door Lock/Window Switch - Passenger (YE9 or Y91), Roof Beacon Switch (5X7, 5Y0 or TRW)
10	UNLCK2 Fuse	15A	Door Latch - Passenger (AU3 except AN3/DL3)
11	LCK2 Fuse	15A	Door Latch - Passenger (AU3 except AN3 or DL3), Door Latch - Driver (AU3 except AN3 or DL3)
12	STOP LAMPS Fuse	15A	Body Control Module (BCM)
13	REAR HVAC Fuse	30A	Not Used
14	PWR MIR Fuse	2A	Outside Rearview Mirror Switch (DL8 or DPN with YE9 and without AN3)
15	BCM Fuse	10A	Body Control Module (BCM)
16	AUX PWR Fuse	20A	Accessory Power Outlet - Center Console (D07 with UQA), Accessory power Outlet - Center Console Compartment (D07 with UQA), Accessory Power Outlet - I/P 2
17	IS LPS Fuse	10A	Body Control Module (BCM)
18	UNLCK1 Fuse	15A	Door Latch - Left Rear (Crew Cab), Door Latch - Right Rear (Crew Cab)
19	RSE Fuse	5A	Video Display (U42)
20	OBS DET Fuse	10A	Rear Object Sensor Control Module (UD7)
21	LCK 1 Fuse	15A	Door Latch - Left Rear (Crew Cab), Door Latch - Right Rear (Crew Cab)
22	INFO Fuse	10A	Vehicle Communciation Interface Module (VCIM) (UE1)
23	REAR WPR Fuse	25A	Not Used
24	COOLED SEATS Fuse	30A	Seat Climate Control Module (KB6)
25	DSM Fuse	10A	Memory Seat Module (AN3), Remote Control Door Lock Receiver (RCDLR) (AP3 or AP8)
26	DRV UNLCK Fuse	15A	Door Latch - Driver (AU3 except AN3 or DL3)
--	LT DR Circuit Breaker	25A	Door Lock Window Switch - Driver (AN3 or DL3), Window Switch - Driver (A31 except AN3 or DL3), Window Switch - Left Rear (A31)
Note: Relays listed below are non-serviceable Printed Circuit Board (PCB) relays and are internal to the block.			
--	Lock PCB Relay (AU3 except AN3/ DL3)	--	Door Latch - Driver, Door Latch - Passenger, Door Latch - Left Rear (Crew Cab), Door Latch - Right Rear (Crew Cab)
--	Lock/Unlock PCB Relay (Crew Cab with AN3)	--	Door Latch - Left Rear, Door Latch - Right Rear
--	Unlock PCB Relay (AU3 except AN3/ DL3)	--	Door Latch - Driver, Door Latch - Passenger, Door Latch - Left Rear (Crew Cab), Door Latch - Right Rear (Crew Cab)

Fuse Block - I/P Top View

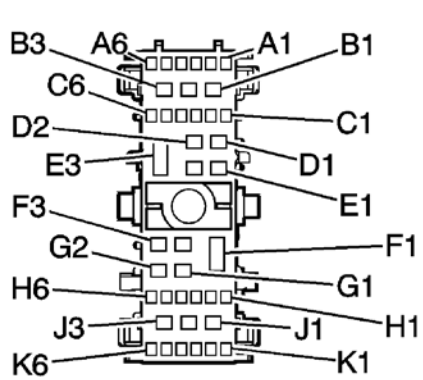


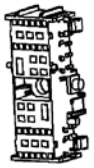
Fuse Block - I/P Bottom View



Fuse Block - I/P X1

Connector Part Information





Harness Type: Instrument Panel

OEM Connector: 13552254

Service Connector:19178190

Description: 40-Way F GT 150 280 Metri-Pack 800 (BK)

Terminal Part Information

Pins: A1, A2, A5, A6, C1– C4, H5, H6, K1, K2

Terminated Lead: 13575735

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-2A (GY)

Terminal/Tray: 12191812/19

Core/Insulation Crimp: Pins: A1, A2 – C/A

Core/Insulation Crimp: Pins: A5, A6, C1– C4, H5, H6, K1, K2 – E/C

Pins: B2, D1, D2, F2, F3, G1, J1, J2, J3

Terminated Lead: 13575753

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 15304711/8

Core/Insulation Crimp: Pins: B2, F3, J3 – E/A

Core/Insulation Crimp: Pins: D1, D2, F2, G1, J1, J2 – 2/A

Pins: D1(5X7, 5Y0, or TRW without YE9), E2, G2

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 15304711/8

Core/Insulation Crimp: Not Available

Pins: E1

Terminated Lead: 13575756

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 15304713/19

Core/Insulation Crimp: F/D

Pins: E3, F1

Terminated Lead: 13575718

Release Tool: J-38125-558

Diagnostic Test Probe: J-35616-44 (YE)

Terminal/Tray: 12110127/19

Core/Insulation Crimp: F/G

Pin	Wire	Circuit	Function
A1	0.8 TN	201	Left Front Speaker Output (+)
A2	0.8 GY	118	Left Front Speaker Output (-)
A3-A4	--	--	Not Used
A5	0.35 GY	1690	Automatic Day/Night Mirror Signal (HP2 or DL3 with DD8 or DRC)
A6	0.35 PK	1691	Low Reference (HP2 or DL3 with DD8 or DRC)
B1	--	--	Not Used

(continued on next page)

Fuse Block - I/P X1 (cont'd)

Pin	Wire	Circuit	Function
B2	0.5 RD/WH	2540	Battery Positive Voltage
B3	--	--	Not Used
C1	0.35 BN/WH	230	Instrument Panel Lamps Dimming Control (HP2 or AU3 without AN3)
C2	0.35 D-GN	5060	Low Speed GMLAN Serial Data (HP2, YE9 or, Y91 with AN3 or DL3)
C3	0.5 L-BU/WH	1314	Left Front Turn Signal Lamp Supply Voltage (DL3, DPN or HP2)
C4	0.5 L-BU/WH	1314	Left Front Turn Signal Lamp Supply Voltage (DL3, DPN or HP2)
C5-C6	--	--	Not Used
D1	0.8 RD/WH	3040	Battery Positive Voltage
	0.5 RD/WH	3040	Battery Positive Voltage (5X7, 5Y0 or TRW without YE9)
D2	0.8 RD/WH	2940	Battery Positive Voltage
E1	3 BK	1850	Ground
E2	0.8 RD/WH	240	Battery Positive Voltage (YE9, Y91 or HP2)
	0.5 RD/WH	240	Battery Positive Voltage (YE9, Y91 or HP2)
E3	5 RD/BK	842	Battery Positive Voltage (except MEX)
	5 RD/BK	42	Battery Positive Voltage (MEX)

Pin	Wire	Circuit	Function
F1	5 RD/BK	42	Battery Positive Voltage (except MEX)
	5 RD/BK	842	Battery Positive Voltage (MEX)
F2	0.8 TN	294	Door Lock Actuator Unlock Control (HP2 or AU3 without AN3 or DL3)
F3	0.5 RD/WH	3840	Battery Positive Voltage
G1	0.8 GY	295	Door Lock Actuator Lock Control (HP2 or AU3 without AN3 or DL3)
G2	0.8 RD/WH	1040	Battery Positive Voltage
	0.8 RD/WH	1040	Battery Positive Voltage (except MEX)
H1-H4	--	--	Not Used
H5	0.5 RD/WH	1540	Battery Positive Voltage (U42 or HP2)
H6	0.5 RD/WH	1540	Battery Positive Voltage (UE1 with Y91)
	0.5 RD/WH	3240	Battery Positive Voltage (except Y91)
J1	0.8 RD/WH	2740	Battery Positive Voltage
J2	0.8 RD/WH	2240	Battery Positive Voltage
J3	0.5 RD/WH	2140	Battery Positive Voltage
K1	0.35 BN	6136	Supply Voltage (except MEX)
K2	0.35 YE	6817	LED Backlight Dimming Control (except MEX)
K3-K6	--	--	Not Used

Fuse Block - I/P X2 (except MEX)

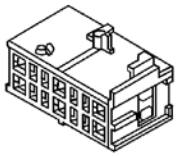
Connector Part Information

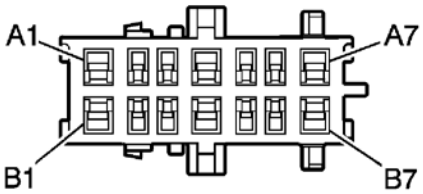
Harness Type: Body

OEM Connector: 15467621

Service Connector: 19115663

Description:
14-Way F GT
150/280 Series (GY)





Terminal Part Information

Pins: A2, B5

Terminated Lead: 13575735

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-2A (GY)

Terminal/Tray: 12191812/19

Core/Insulation Crimp: E/C

Pins: B7 (AN3)

Terminated Lead: 13575753

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 15304711/8

Core/Insulation Crimp: E/A

Pins: A1, B7 (AP3 or AP8)

Terminated Lead: 13575753

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 15304711/8

Core/Insulation Crimp: 2/A

Pins: A3, A5

Terminated Lead: 13575735

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-2A (GY)

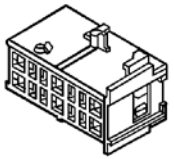
Terminal/Tray: 12191812/19

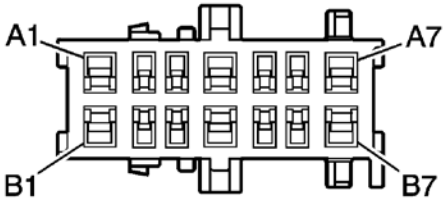
Core/Insulation Crimp: C/A

Pin	Wire	Circuit	Function
A1	0.8 RD/WH	6040	Battery Positive Voltage (AZ3, Crew Cab or Extended Cab with D07, with UQ3 or HP2)
A2	0.35 L-BU	5921	Driver Door Unlock Relay Control (YE9 or HP2 without AN3 or DL3)
A3	0.8 GY	295	Door Lock Actuator Lock Control (AU3 with YE9 and without AN3 or DL3, or HP2 without DL3)
A4	--	--	Not Used
A5	0.8 TN	694	Driver Door Lock Actuator Unlock Control (AU3 with YE9 and without AN3 or DL3, or HP2 without DL3)
A6	--	--	Not Used
A7	3 RD/WH	4740	Battery Positive Voltage (KB6)
B1	3 RD/WH	1240	Battery Positive Voltage (Crew Cab with A31 or HP2, or Extended Cab with ABV)
B2-B4	--	--	Not Used
B5	0.35 RD/WH	840	Battery Positive Voltage (UD7)
B6	--	--	Not Used
B7	0.35 RD/WH	1140	Battery Positive Voltage (AN3)
	0.8 RD/WH	1140	Battery Positive Voltage (AP3 or AP8)

Fuse Block - I/P X3

Connector Part Information





Harness Type: Body

OEM Connector: 15467620

Service Connector: 19115662

Description: 14-Way F GT 150/280 Series (BK)

Terminal Part Information

Pins: A2-A3, A5-A6, B5-B6

Terminated Lead: 13575735

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-2A (GY)

Terminal/Tray: 12191812/19

Core/Insulation Crimp: E/C

Pins: B1, B4

Terminated Lead: 13575753

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

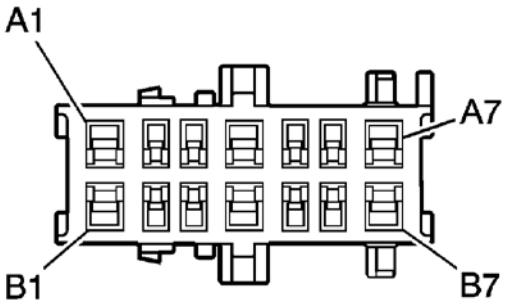
Terminal/Tray: 15304711/8

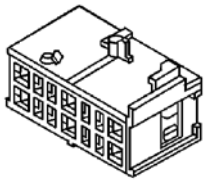
Core/Insulation Crimp: 2/A

Pin	Wire	Circuit	Function
A1	--	--	Not Used
A2	0.35 L-BU	195	Door Lock Control (YE9 or HP2)
	0.35 L-BU	5921	Driver Unlock Relay Control (except YE9, MEX, HP2 or A52)
A3	0.35 WH	194	Unlock Relay Control (AU3, AN3 or HP2)
A4	--	--	Not Used
A5	0.35 OG/BK	781	Driver Door Lock Switch Unlock Signal (except YE9, MEX, HP2 or A52)
A6	0.35 PK/BK	780	Driver Door Lock Switch Lock Signal (except YE9, MEX, HP2 or A52)
A7	--	--	Not Used
B1	0.8 TN	294	Door Lock Actuator Unlock Control (Crew Cab with AU3 or HP2)
	0.8 TN	294	Door Lock Actuator Unlock Control (Crew Cab with AU3 or HP2)
B2-B3	--	--	Not Used
B4	0.8 GY	295	Door Lock Actuator Lock Control (Crew Cab with AU3 or HP2)
	0.8 GY	295	Door Lock Actuator Lock Control (Crew Cab with AU3 or HP2)
B5	0.35 TN	126	Left Front Door Open Switch Signal (MEX or A52)
B6	0.35 GY/BK	745	Left Front Door Ajar Switch Signal (except AN3 or DL3)
B7	--	--	Not Used

Fuse Block - I/P X4

Connector Part Information





Harness Type:
Left Front Door

OEM Connector: 15467622

Service Connector: 19115664

Description: 14-Way F GT 150/280 Series (L-GY)

Terminal Part Information

Pins: A1, B1 (without YE9)

Terminated Lead: 13575754

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 15304713/19

Core/Insulation Crimp: Pins: 4/4

Pins: A2, A3, A5, B2, B3, B5, B6

Terminated Lead: 13575735

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-2A (GY)

Terminal/Tray: 12191812/19

Core/Insulation Crimp: Pins: A2, A3, A5, B2, B3, B5, B6 (UQ3 or UQ5) – E/C

Core/Insulation Crimp: Pin: B5, B6 (UQ4) – C/A

Pins: A4, A7, B1, B4, B7

Terminated Lead: 13575753

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 15304711/8

Core/Insulation Crimp: Pins A4, A7, B1 (AU3 without A31), B7 – E/A

Core/Insulation Crimp: Pins A7, B4, – 2/A

Pin	Wire	Circuit	Function
A1	2 RD/WH	1240	Battery Positive Voltage (A31)
A2	0.35 D-GN	5060	Low Speed GMLAN Serial Data (YE9 or Y91 with AN3 or DL3)
	0.35 OG/BK	781	Driver Door Lock Switch Unlock Signal (AU3 without YE9)
A3	0.35 GY/BK	745	Left Front Door Ajar Switch Signal (except AN3 or DL3)
A4	0.35 BN/WH	230	Instrument Panel Lamps Dimming Control (A31 without AN3)
	0.35 BN/WH	230	Instrument Panel Lamps Dimming Control (DL8, DPN or YE9 without AN3)
	0.35 PK/BK	780	Driver Door Lock Switch Lock Signal (AU3 without YE9)
A5	0.35 PK	1691	Low Reference (DL3 with DD8 or DRC)
A6	--	--	Not Used

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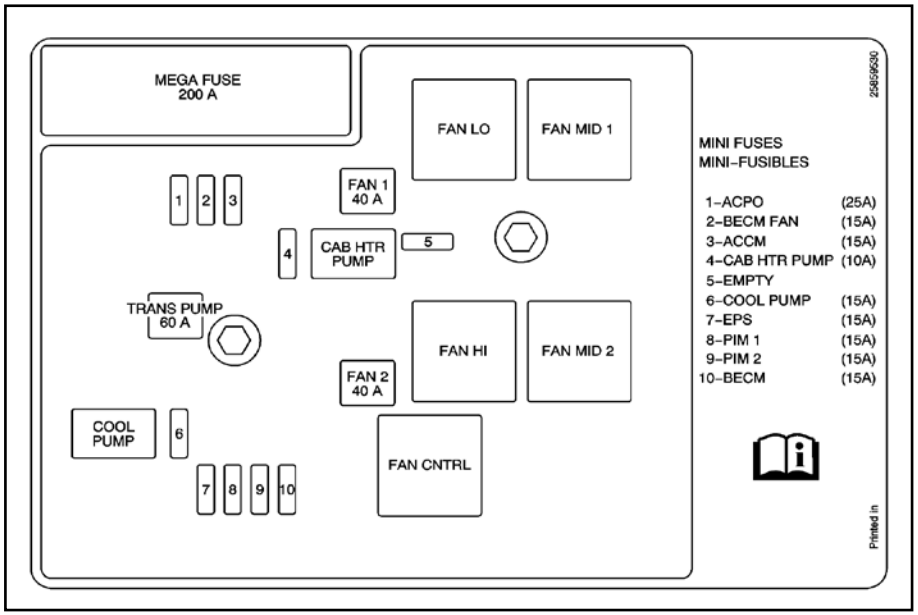
Fuse Block - I/P X4 (cont'd)

Pin	Wire	Circuit	Function
A7	1 GY	295	Door Lock Actuator Lock Control (AU3 without YE9, AN3 or DL3)
	0.5 RD/WH	3540	Battery Positive Voltage (DL8 or DPN without AN3)
B1	2 BK	1850	Ground (without YE9)
	3 BK	1850	Ground (YE9)
	0.35 BK	1850	Ground (AU3 without A31)
B2	0.5 L-BU/WH	1314	Left Front Turn Signal Lamp Supply Voltage (DL3 or DPN)
B3	0.35 BN/WH	230	Instrument Panel Lamps Dimming Control (AU3 without AN3)
B4	0.8 RD/WH	140	Battery Positive Voltage (AN3)
	1 TN	694	Driver Door Lock Actuator Unlock Control (AU3 without YE9, AN3 or DL3)

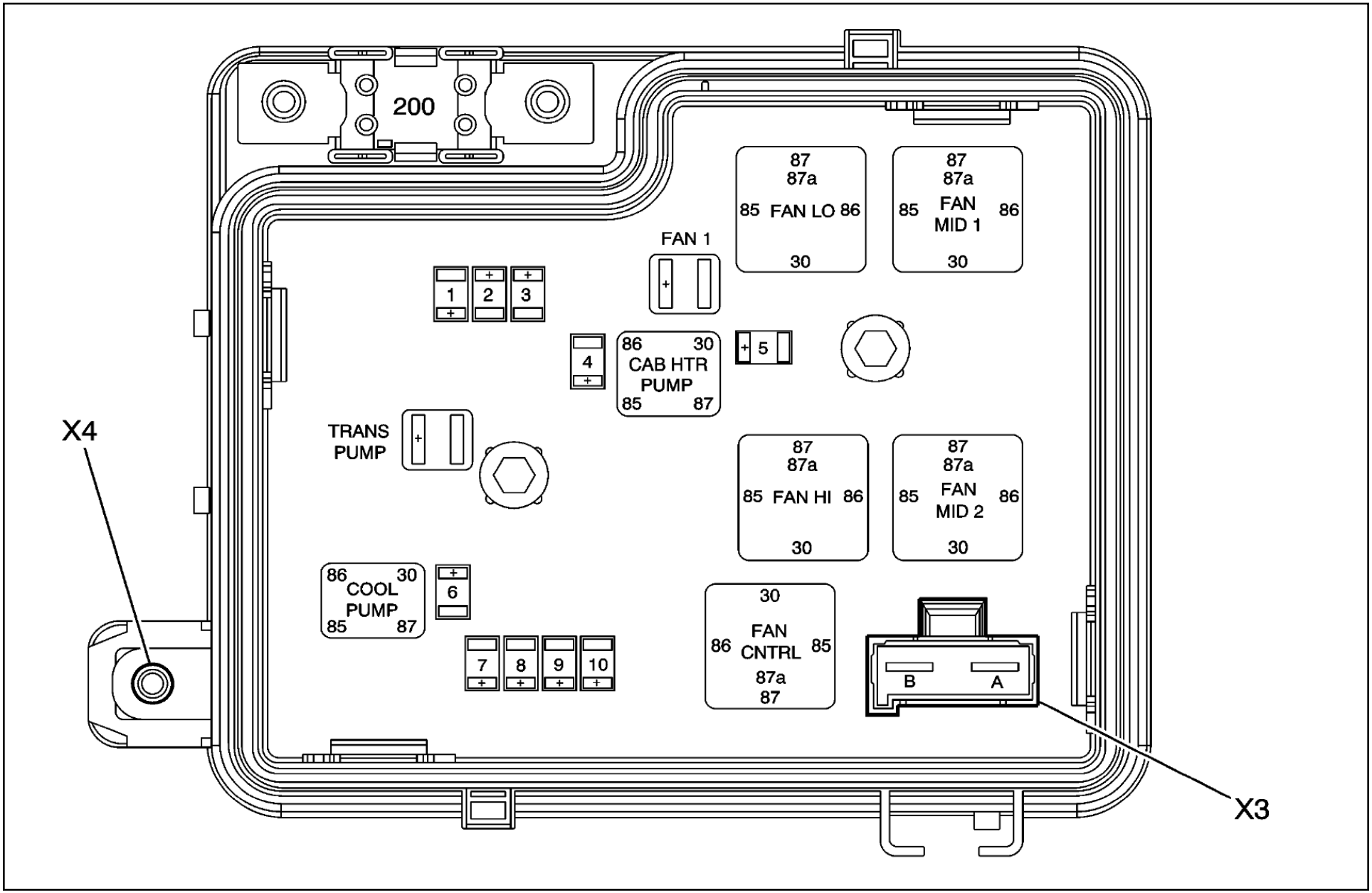
Pin	Wire	Circuit	Function
B5	0.8 GY	118	Left Front Speaker Output (-) (UQA)
	0.5 GY	118	Left Front Speaker Output (-) (UQ3 or UQ5)
B6	0.8 TN	201	Left Front Speaker Output (+) (UQA)
	0.5 TN	201	Left Front Speaker Output (+) (UQ3 or UQ5)
B7	0.35 GY	1690	Automatic Day/Night Mirror Signal (DL3 with DD8 or DRC)

Fuse Block - Auxiliary (HP2) Label

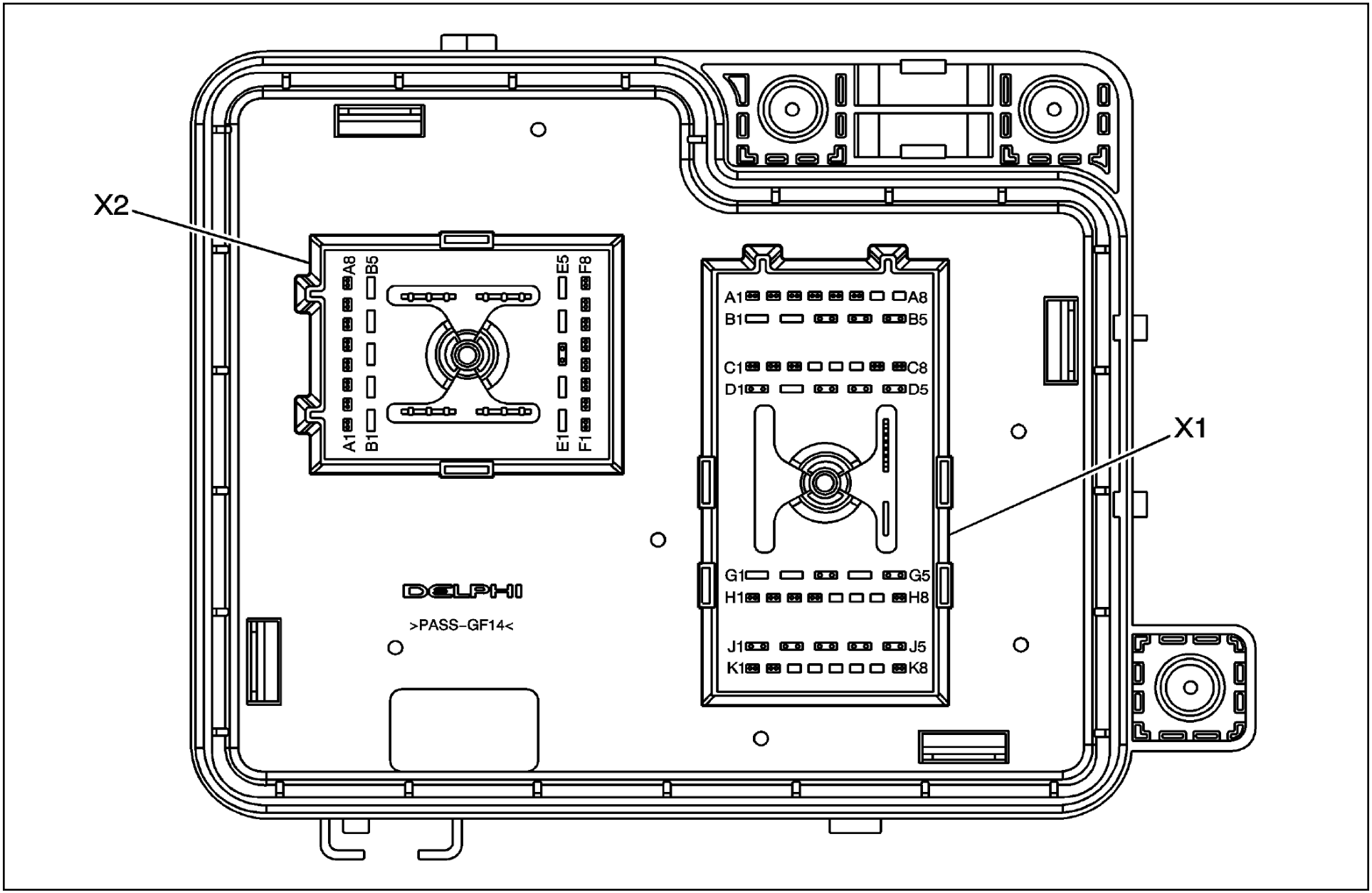


Pin	Wire	Circuit	Function
1	ACPO Fuse	25A	Not Used
2	BECM FAN Fuse	15A	Generator Battery Vent Fan Relay
3	ACCM Fuse	15A	A/C Compressor
4	CAB HTR PUMP Fuse	10A	Heater Coolant Pump
5	EMPTY	--	Not Used
6	COOL PUMP Fuse	15A	Generator Control Module Coolant Pump - Left, Generator Control Module Coolant Pump - Right
7	EPS Fuse	15A	Electronic Power Steering Motor Control Module
8	PIM 1 Fuse	15A	Drive Motor Generator Power Inverter Module
9	PIM 2 Fuse	15A	Drive Motor Generator Power Inverter Module
10	BECM Fuse	15A	Drive Motor Generator Battery Control Module, Serial Data Gateway (SDG) Module
--	FAN 1 Fuse	40A	FAN LO Relay, FAN MID 1 Relay
--	FAN 2 Fuse	40A	FAN HI Relay, FAN MID 2 Relay
--	TRANS PUMP Fuse	60A	Auxiliary Transmission Pump Control Module
--	CAB HTR PUMP Relay	--	CAB HTR PUMP Fuse, Heater Coolant Pump
--	COOL PUMP Relay	--	COOL PUMP Fuse, Generator Control Module Coolant Pump - Left, Generator Control Module Coolant Pump - Right
--	FAN LO Relay	--	Cooling Fan - Left
--	FAN MID 1 Relay	--	Engine Cooling Fan Resistor - Left
--	FAN MID 2 Relay	--	Cooling Fan - Right
--	FAN HI Relay	--	Cooling Fan - Right
--	FAN CNTRL Relay	--	Cooling Fan - Left

Fuse Block - Auxiliary (HP2), Top View

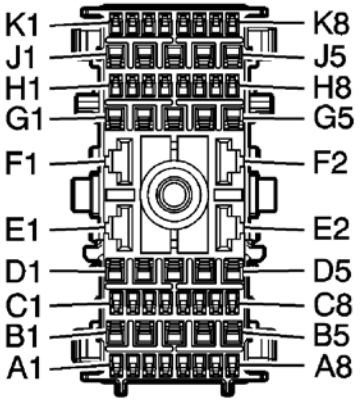


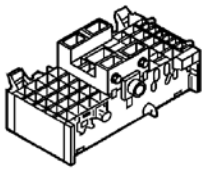
Fuse Block - Auxiliary (HP2), Bottom View



Fuse Block - Auxiliary X1 (HP2)

Connector Part Information





Harness: Engine

OEM: 15477822

Service:19115189

Description: 56-Way F GT 150 280 Metri-Pack 800 Series (BK)

Terminal Part Information

Pins: A1-A3, C2, C3, H3, H4, H8, K2

Terminated Lead: 13575735

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-2A (GY)

Terminal/Tray: 12191812/19

Core/Insulation Crimp: E/C

Pins: B3-B5, D1, J2, J3

Terminated Lead: 13575753

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 15304711/8

Core/Insulation Crimp: 2/A

Pin: C1

Terminated Lead: 13575735

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-2A (GY)

Terminal/Tray: 12191812/19

Core/Insulation Crimp: C/A

Pin: E2

Terminated Lead: Pending

Release Tool: J-38125-558

Diagnostic Test Probe: J-35616-44 (YE)

Terminal/Tray: 12110127/19

Core/Insulation Crimp: Not Available

Pins: G5, J4

Terminated Lead: 13575753

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 15304711/8

Core/Insulation Crimp: E/A

Pin: J1

Terminated Lead: 13575753

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 15304711/8

Core/Insulation Crimp: 2/A

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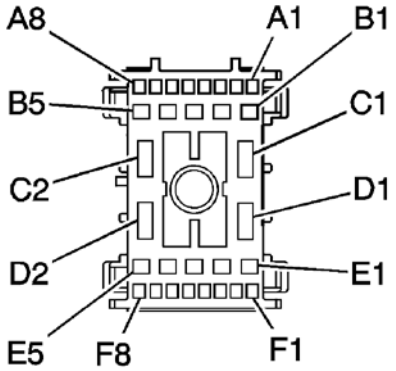
Fuse Block - Auxiliary X1 (HP2) (cont'd)

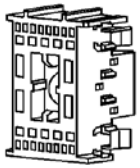
Pin	Wire	Circuit	Function
A1	0.35 D-BU	473	High Speed Cooling Fan Relay Control
A2	0.35 PU	5128	Auxiliary Cooling Fan Relay Control
A3	0.5 PK	1839	Ignition Voltage
A4-A8	--	--	Not Used
B1-B2	--	--	Not Used
B3	0.8 RD/WH	3340	Battery Positive Voltage
B4	0.8 RD/WH	4640	Battery Positive Voltage
B5	1 RD/WH	4140	Battery Positive Voltage
C1	0.8 PK	2014	Coolant Pump Relay Control
C2	0.5 TN	955	Low Reference
C3	0.5 YE	954	5-Volt Reference
C4-C8	--	--	Not Used
D1	0.8 OG/WH	7585	Motor Feed
D2-D5	--	--	Not Used
E1	--	--	Not Used
E2	5 RD/WH	4040	Battery Positive Voltage
F1-F2	--	--	Not Used
G1-G4	--	--	Not Used

Pin	Wire	Circuit	Function
G5	0.5 D-GN	942	Generator Control Module Coolant Pump Feed
H1-H2	--	--	Not Used
H3	0.35 D-GN	335	Low Speed Cooling Fan Relay Control
H4	0.5 PU	5531	Hood Switch Signal
H5-H7	--	--	Not Used
H8	0.5 D-BU	941	Generator Control Module Coolant Pump Relay Control
J1	0.8 RD/WH	4240	Battery Positive Voltage
	0.8 RD/WH	4240	Battery Positive Voltage
J2	0.8 RD/WH	984	5-Volt Reference
J3	0.8 RD/WH	983	Transmission Fluid Pump Control
J4	0.5 RD/WH	40	Battery Positive Voltage
J5	--	--	Not Used
K1	--	--	Not Used
K2	0.5 PK/BK	109	Hood Ajar Switch Signal
K3-K8	--	--	Not Used

Fuse Block - Auxiliary X2 (HP2)

Connector Part Information





Harness Type: Forward Lamp

OEM Connector: 13567518

Service Connector: 19180280

Description: 30-Way F GT 150 280 Metri-Pack 800 Series (BK)

Terminal Part Information

Pins: A2–A8, F1–F5

Terminated Lead: 13575790

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-2A (GY)

Terminal/Tray: 15496302/5

Core/Insulation Crimp: Pins A2–A8, F4, F5 – E/A

Core/Insulation Crimp: Pins F1–2/A

Pins: C1, C2, D1, D2

Terminated Lead: 13575718

Release Tool: J-38125-558

Diagnostic Test Probe: J-35616-44 (YE)

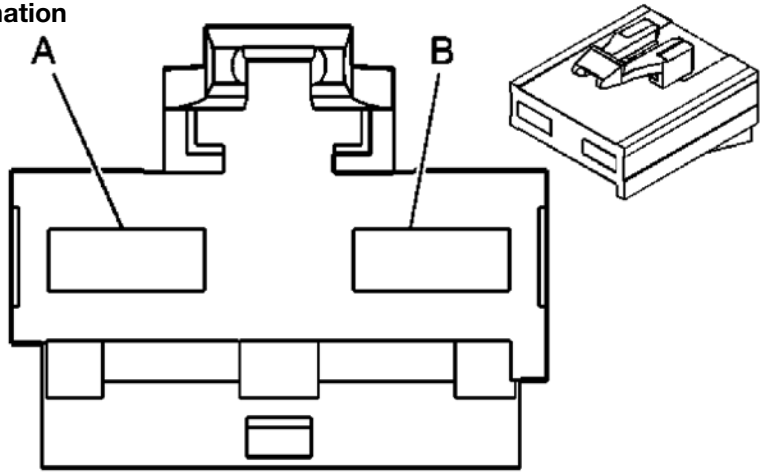
Terminal/Tray: 12110127/19

Core/Insulation Crimp: F/G

Pin	Wire	Circuit	Function
A1	--	--	Not Used
A2	0.5 PU	5531	Hood Switch Signal
A3	0.5 PK/BK	109	Hood Ajar Switch Signal
A4	--	--	Not Used
A5	0.5 PU	5531	Hood Switch Signal
A6	0.5 PU	5531	Hood Switch Signal
A7	0.5 PK/BK	109	Hood Ajar Switch Signal
A8	0.5 PK/BK	109	Hood Ajar Switch Signal
B1-B5	--	--	Not Used
C1	5 GY	532	Cooling Fan Motor Supply Voltage
C2	5 L-BU	409	Cooling Fan Motor Supply Voltage
D1	5 GY	532	Cooling Fan Motor Supply Voltage
D2	5 L-BU	409	Cooling Fan Motor Supply Voltage
E1-E5	--	--	Not Used
F1	0.8 BK	250	Ground
F2-F3	--	--	Not Used
F4	0.5 YE	954	Electronics Coolant Temperature Sensor 5-volt Reference
F5	0.5 YE	955	Electronics Coolant Temperature Sensor Low Reference
F6-F8	--	--	Not Used

Fuse Blocks - Auxiliary X3 (HP2), Auxiliary X4 (HP2), Auxiliary Fuse Holder (HP2)

Fuse Block - Auxiliary X3 (HP2)
Connector Part Information



Harness Type: Forward Lamp

OEM Connector: 12193693

Service Connector: 15306393

Description: 2-Way F MAXI FUSE (BK)

Terminal Part Information

Terminated Lead: 13575718

Release Tool: J-38125-558

Diagnostic Test Probe: J-35616-44 (YE)

Terminal/Tray: 12110127/19

Core/Insulation Crimp: F/G

Pin	Wire	Circuit	Function
A	5 BK	150	Ground
B	5 YE	5358	Auxiliary Cooling Fan Motor Supply Voltage

Fuse Block - Auxiliary X4 (HP2)
Terminal Part Information

Harness Type: Battery Cable

Terminal: 12146714

Core/Insulation Crimp: Not Available

Description: Ring Terminal

Pin	Wire	Circuit	Function
+	13 RD/BK	2	Battery Positive Voltage

Fuse Block - Auxiliary, Fuse Holder (HP2)
Terminal Part Information

Harness Type: Battery Cable

Terminal: 15326191

Core/Insulation Crimp: Not Available

Description: Ring Terminal

Pin	Wire	Circuit	Function
+	50 RD	1	Battery Positive Voltage

Fuse Block - Auxiliary, Fuse Holder (HP2)
Terminal Part Information

Harness Type: Accessory DC Power Control Module Cable

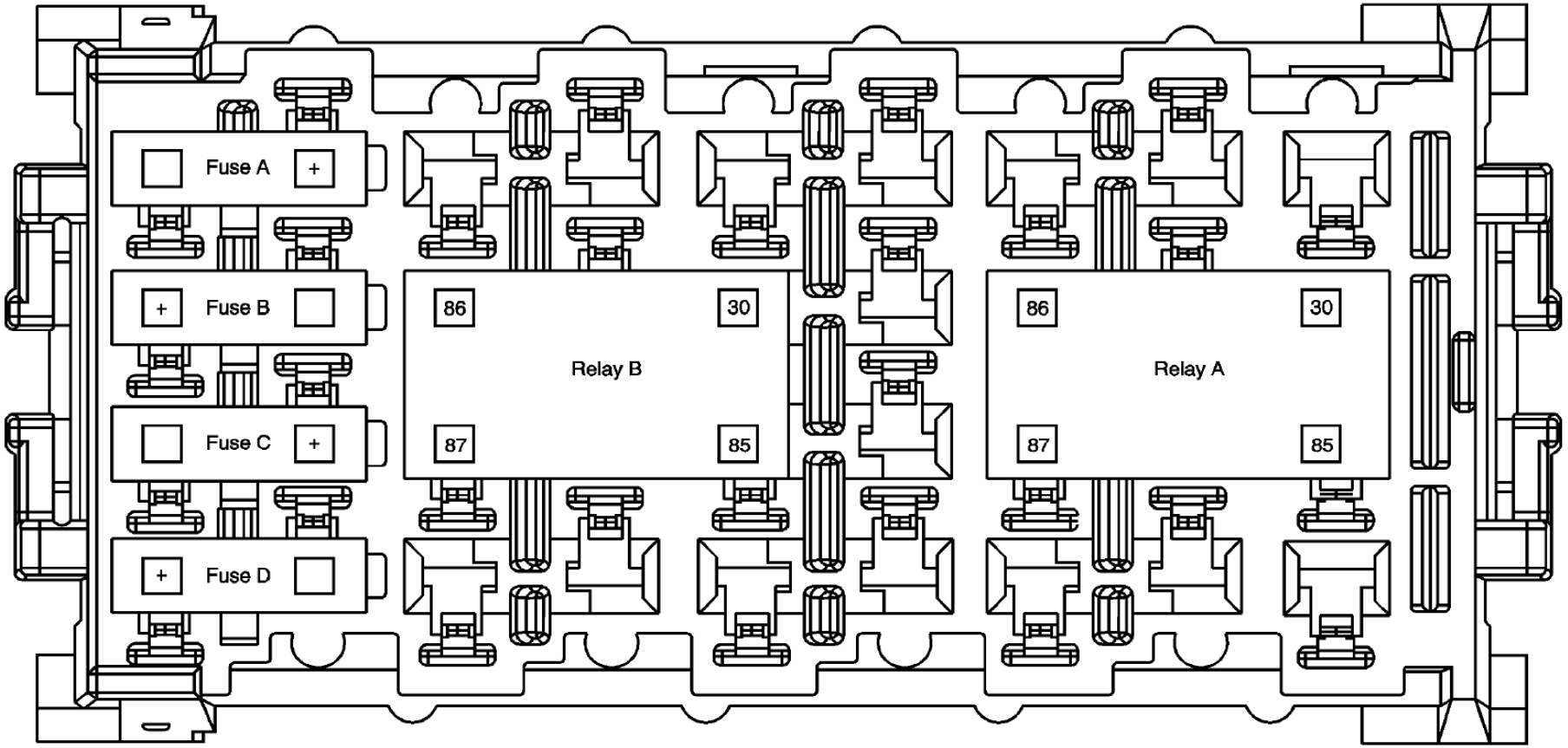
Terminal: 15326191

Core/Insulation Crimp: Not Available

Description: Ring Terminal

Pin	Wire	Circuit	Function
+	62 RD	2	Battery Positive Voltage

Fuse Block - Mobile Radio, Top View (9L4), Device Usage



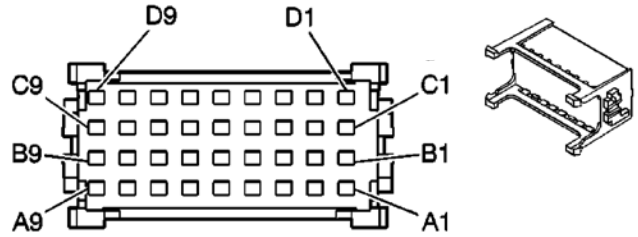
Fuse Block - Mobile Radio, Device Usage (9L4)

Device	Rating	Description
Fuse A	30A	Blunt Cut - Mobile Radio Provision
Fuse B	30A	Blunt Cut - Mobile Radio Provision
Fuse C	30A	Blunt Cut - Mobile Radio Provision

Device	Rating	Description
Fuse D	30A	Blunt Cut - Mobile Radio Provision
Relay A	--	Blunt Cut - Mobile Radio Provision
Relay B	--	Blunt Cut - Mobile Radio Provision

Fuse Block - Mobile Radio (9L4)

Connector Part Information



Harness Type:
Fuse Block
Jumper

OEM Connector: 12160504

Service: Service by Harness - See Part Catalog

Description: 36-Way F Metri-Pack 280 Series, Flexlock (BK)

Terminal Part Information

Pins: A8, A9, B1, B5, B8, C1, C3, C5, C7-C9, D8

Terminal/Tray: 12110652/4

Core/Insulation Crimp: See Terminal Repair Kit

Release Tool/Test Probe: See Terminal Repair Kit

Pins: B3

Terminal/Tray: 12110657/4

Core/Insulation Crimp: See Terminal Repair Kit

Release Tool/Test Probe: See Terminal Repair Kit

Pins: B7

Terminal/Tray: 12110652/4

Core/Insulation Crimp: F/D

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: B9, D9

Terminal/Tray: 12110657/4

Core/Insulation Crimp: B/G

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pin	Wire	Circuit	Function
A1-A7	--	--	Not Used
A8	3 BK	50	Ground
A9	3 BK	450	Ground
B1	3 L-BU	6122	Mobile Radio Relay Control
B2	--	--	Not Used
B3	1 BK	450	Ground
	1 BK	450	Ground
B4	--	--	Not Used
B5	3 L-GN	6123	Relay B Output
B6	--	--	Not Used
B7	1 BK	450	Ground
B8	3 RD/WH	5440	Battery Positive Voltage
B9	5 RD/BK	102	Battery Positive Voltage
C1	0.5 YE	43	Ignition Voltage Signal
C2	--	--	Not Used
C3	3 RD/WH	5440	Battery Positive Voltage
C4	--	--	Not Used
C5	3 L-BU	6122	Mobile Radio Relay Control
C6	--	--	Not Used
C7	3 RD/WH	5440	Battery Positive Voltage
C8	3 BK	50	Ground
C9	3 BK	450	Ground
D1-D7	--	--	Not Used
D8	3 RD/WH	5440	Battery Positive Voltage
D9	5 RD/BK	102	Battery Positive Voltage

Fuse Holder, Device Usage (Gas and Diesel)

Fuse Holder , Device Usage (Gas)

Device	Rating	Description
Mega Fuse	175A	Fuse Block - Underhood, Generator
Mega Fuse	125A	Auxiliary Battery Relay (TP2)
Mega Fuse	60A	Fuse Block - Mobile Radio (9L4)

Fuse Holder , Device Usage (Diesel)

Device	Rating	Description
Mega Fuse	175A	Fuse Block - Underhood, Generator
Mega Fuse	175A	Auxiliary Battery Relay (TP2), Generator - Auxiliary (K76/YF2), Intake Air Heater
Mega Fuse	125A	Glow Plug Control Module

Fuse Holders: X1 (Gas except 9L4), X1 (Diesel or Gas with 9L4), X2 (Gas with TP2), X2 (Diesel or Gas except LU3), X2 (LU3), X2 (Gas except LU3)

Fuse Holder X1 (Gas except 9L4)
Terminal Part Information

Harness Type: Battery Positive
Terminal: 00010584
Core/Insulation Crimp: Not Available
Description: Ring Terminal

Pin	Wire	Circuit	Function
1	32 RD	1	Battery Positive Voltage

Fuse Holder X2 (Diesel or Gas except LU3)
Terminal Part Information

Harness Type: Battery Positive
Terminal: 00010375 (Gas except 9L4)
Terminal: 00010378 (Diesel/Gas with 9L4)
Core/Insulation Crimp: Not Available
Description: Ring Terminal

Pin	Wire	Circuit	Function
1	19 RD	2	Battery Positive Voltage

Fuse Holder X1 (Diesel or Gas with 9L4)
Terminal Part Information

Harness Type: Chassis
Terminal: 00010584
Core/Insulation Crimp: Not Available
Description: Ring Terminal

Pin	Wire	Circuit	Function
1	32 RD	1	Battery Positive Voltage

Fuse Holder X2 (LU3)
Terminal Part Information

Harness Type: Engine
Terminal: 13544833
Core/Insulation Crimp: Not Available
Description: Ring Terminal

Pin	Wire	Circuit	Function
1	19 RD/BK	2	Battery Positive Voltage

Fuse Holder X2 (Gas with TP2)
Terminal Part Information

Harness Type: Auxiliary Battery Positive
Terminal: 00010378
Core/Insulation Crimp: Not Available
Description: Ring Terminal

Pin	Wire	Circuit	Function
1	19 RD/BK	2	Battery Positive Voltage

Fuse Holder X2 (Gas except LU3)
Terminal Part Information

Harness Type: Generator Jumper
Terminal: 00010375
Core/Insulation Crimp: Not Available
Description: Ring Terminal

Pin	Wire	Circuit	Function
1	19 RD/BK	2	Battery Positive Voltage

Fuse Holders: X2 (Diesel), X3 (9L4), X3 (Diesel), X4 (TP2), X4 (Diesel), X4 (Diesel with K76 or YF2)

Fuse Holder X2 (Diesel)
Terminal Part Information

Harness Type: Engine Chassis
Terminal: 12146745
Core/Insulation Crimp: Not Available
Description: Ring Terminal

Pin	Wire	Circuit	Function
1	19 RD/BK	2	Battery Positive Voltage

Fuse Holder X4 (TP2)
Terminal Part Information

Harness Type: Auxiliary Battery Positive
Terminal: 00012131
Core/Insulation Crimp: Not Available
Description: Ring Terminal

Pin	Wire	Circuit	Function
1	13 RD/BK	2	Battery Positive Voltage

Fuse Holder X3 (9L4)
Terminal Part Information

Harness Type: Battery Positive
Terminal: 12146363
Core/Insulation Crimp: Not Available
Description: Ring Terminal

Pin	Wire	Circuit	Function
1	8 RD/BK	102	Battery Positive Voltage

Fuse Holder X4 (Diesel)
Terminal Part Information

Harness Type: Engine Chassis
Terminal: 12146745
Core/Insulation Crimp: Not Available
Description: Ring Terminal

Pin	Wire	Circuit	Function
1	19 RD	2	Battery Positive Voltage

Fuse Holder X3 (Diesel)
Terminal Part Information

Harness Type: Engine
Terminal: 00012131
Core/Insulation Crimp: Not Available
Description: Ring Terminal

Pin	Wire	Circuit	Function
1	19 RD	2	Battery Positive Voltage

Fuse Holder X4 (Diesel with K76 or YF2)
Terminal Part Information

Terminal: 13544833
Core/Insulation Crimp: Not Available
Description: Ring Terminal

Pin	Wire	Circuit	Function
1	19 RD/BK	2	Battery Positive Voltage

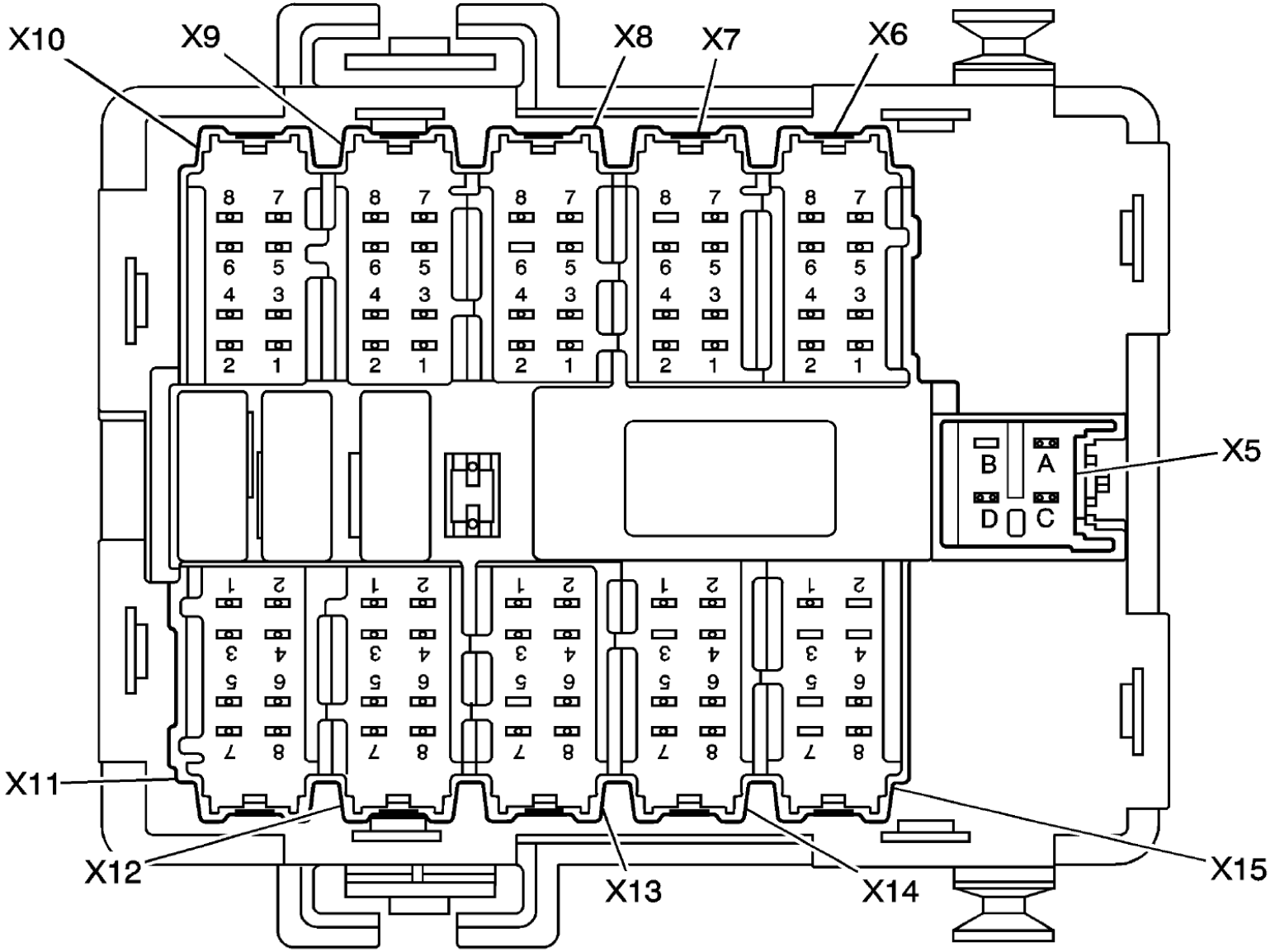
Junction Block - Left I/P, Label

CIRCUIT BREAKERS

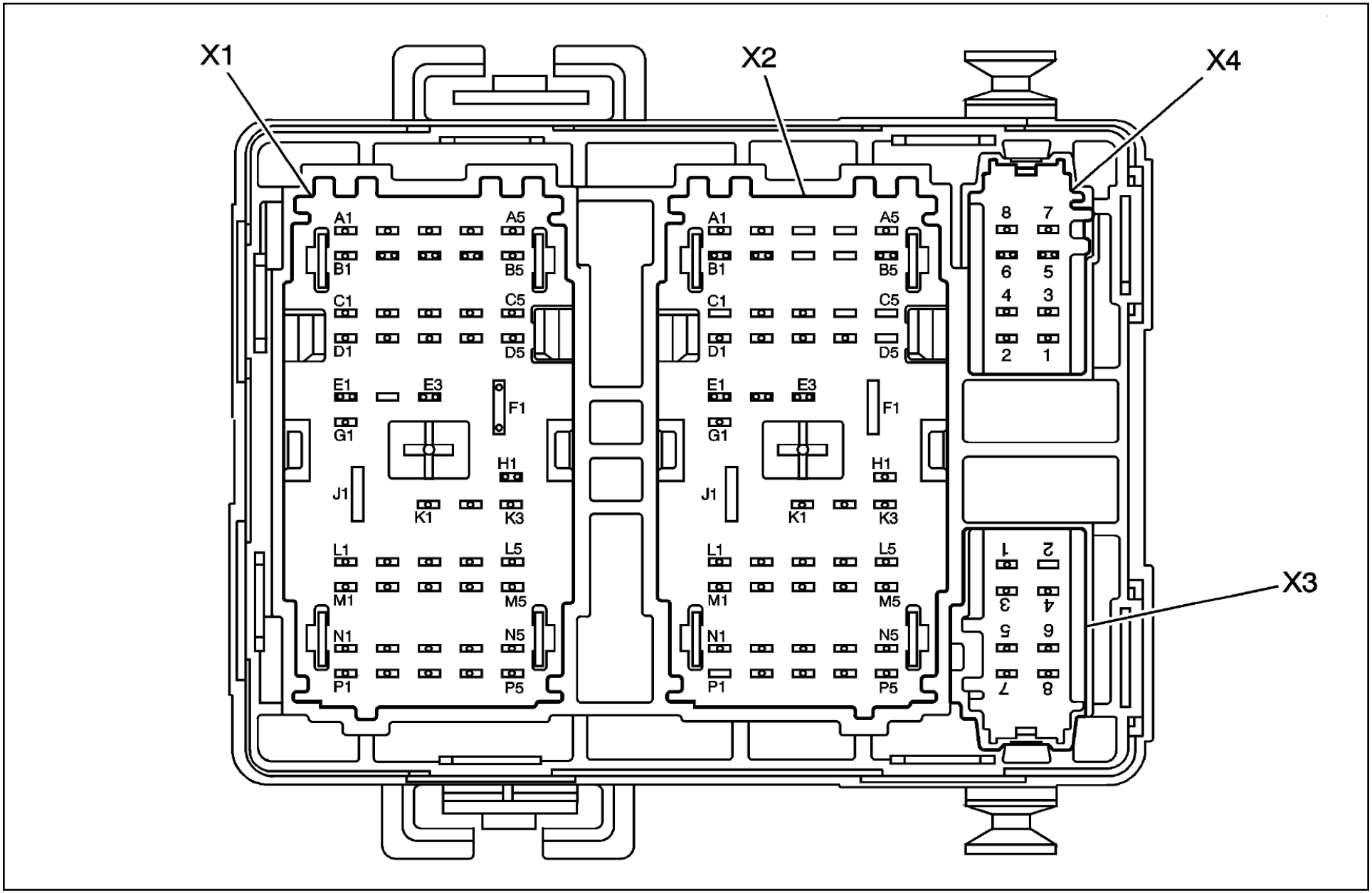
CB1 = RT DOORS (25A)
CB2 = PASS SEAT 1 (25A)
CB3 = DRIVER SEAT 2 (25A)
CB4 = PWR REAR WNDW (25A)

Device	Rating	Description
DRIVER SEAT 2 Circuit Breaker	25A	Memory Seat Module (AN3), Seat Adjuster Switch - Driver (AG1 except AN3)
PASS SEAT 1 Circuit Breaker	25A	Seat Adjuster Switch - Passenger, Seat Lumbar Switch - Passenger (AN3)
PWR REAR WNDW Circuit Breaker	25A	Not Used
RT DOORS Circuit Breaker	25A	Passenger Door Module (PDM), Window Switch - RR

Junction Block - Left I/P, Top View



Junction Block - Left I/P, Bottom View



Junction Block - Left I/P X1 (except MEX)

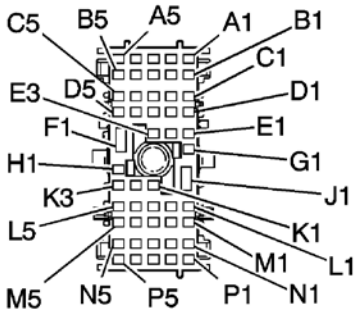
Connector Part Information

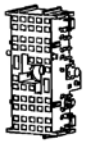
Harness Type:
Instrument Panel

OEM Connector: 15467568

Service Connector: 19115661

Description: 50-Way F
GT 280 Series (GY)





Terminal Part Information

Pins: A1, A3-A5, B3, B4, C1-C3, D3, E1, E3, H1, K1, K3, L1-L4, M1-M4, N1, N3, N5, P1-P3, P5

Terminated Lead: 13575753

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 15304711/8

Core/Insulation Crimp: Pins: A1, A3 (without NQF or NQH), A4 (HP2 or UVC), A5, B4, C1, C2, D3, E1, L1, L2, L3, L4 M1 (without NQF or NQH), M2, M3, M4 N1, N3, N5, P1, P2, P3, P5 – E/A

Core/Insulation Crimp: Pins: A3 (NQF or NQH), A4 (PTO or EXP), B3 , C2 (HP2 or AU3 without AN3), C3, D3 (HP2 or AU3 without AN3), H1, M1(with NQH or NQF) , M5, K3 – 2/A

Pins: E3, K1

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 15304711/8

Core/Insulation Crimp: Not Available

Pins: D1, K2

Terminated Lead: 13575754

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 15304713/19

Core/Insulation Crimp: 4/4

Pins: F1

Terminated Lead: 13575718

Release Tool: J-38125-558

Diagnostic Test Probe: J-35616-44 (YE)

Terminal/Tray: 12110127/19

Core/Insulation Crimp: F/G

Pin	Wire	Circuit	Function
A1	0.5 RD/WH	4440	Battery Positive Voltage
A2	--	--	Not Used
A3	0.35 PK	239	Ignition 1 Voltage
	0.35 PK	239	Ignition 1 Voltage (NQF or NQH)
A4	0.35 PK	239	Ignition 1 Voltage (HP2 or UVC)
	0.8 PK	239	Ignition 1 Voltage (PTO or EXP)
A5	0.5 BK	2550	Ground (U42, UK6 or Y91)
B1-B2	--	--	Not Used
B3	1 BK	2550	Ground
B4	0.5 GY	157	Courtesy Lamp Control
B5	--	--	Not Used
C1	0.35 PK	1639	Ignition 1 Voltage (DL3 with DD8 or DRC)

(continued on next page)

Junction Block - Left I/P X1 (except MEX) (cont'd)

Pin	Wire	Circuit	Function
C2	0.5 BN/WH	230	Instrument Panel Lamps Dimming Control
	0.35 BN/WH	230	Instrument Panel Lamps Dimming Control (HP2 or AU3 without AN3)
C3	0.5 BK	2250	Ground (U2K with Y91)
	0.5 BK	2250	Ground (UE1 with Y91)
C4	--	--	Not Used
C5	0.5 YE/BK	5813	Park Enable Supply Voltage (JF4 without AN3)
D1	2 RD/WH	1340	Battery Positive Voltage (A31 or HP2)
D2	--	--	Not Used
D3	0.35 BN/WH	230	Instrument Panel Lamps Dimming Control (except MEX or 8S8)
	0.5 BN/WH	230	Instrument Panel Lamps Dimming Control (HP2 or AU3 without AN3)
D4-D5	--	--	Not Used
E1	0.5 BK/WH	1851	Ground (XA7)
E2	--	--	Not Used
E3	0.8 BK/WH	1851	Ground
	0.5 BK/WH	1851	Ground
F1	5 RD/BK	642	Battery Positive Voltage (YE9 or HP2)
G1	--	--	Not Used
H1	0.5 BK/WH	1851	Ground
	0.5 BK/WH	1851	Ground
J1	--	--	Not Used

Pin	Wire	Circuit	Function
K1	0.5 BK/WH	1851	Ground
	0.35 BK/WH	1851	Ground
K2	2 BK/WH	1851	Ground
K3	0.8 BK/WH	1851	Ground
	0.8 BK/WH	1851	Ground (EXP or HP2)
L1	0.5 OG	6815	Inadvertent Power Control
L2	0.5 RD/WH	240	Battery Positive Voltage (YE9, Y91 or HP2)
	0.5 RD/WH	3040	Battery Positive Voltage (5X7, 5Y0, TRW or 8S8 without YE9)
L3	0.35 PU/WH	6816	Indicator Dimming Control
L4	0.35 WH/BK	5515	Inside Air Temperature Sensor Assembly Control (CJ2)
L5	--	--	Not Used
M1	0.5 BN/WH	230	Instrument Panel Lamps Dimming Control
	0.5 BN/WH	230	Instrument Panel Lamps Dimming Control (with NQH or HQF)
M2	0.35 PK	1691	Low Reference (HP2 or DL3 with DD8 or DRC)
M3	0.35 PU/WH	6816	Indicator Dimming Control
M4	0.35 D-GN	734	Inside Air Temperature Sensor Signal (CJ2)
M5	0.5 OG	1054	Stop Lamp Supply Voltage (except EXP)
	0.5 OG	1054	Stop Lamp Supply Voltage (except EXP)
	0.5 L-BN	1320	Stop Lamp Supply Voltage (EXP)
N1	0.35 D-GN	6134	Linear Interconnect Network Bus (YE9, Y91 or HP2)

(continued on next page)

Junction Block - Left I/P X1 (except MEX) (cont'd)

Pin	Wire	Circuit	Function
N2	--	--	Not Used
N3	0.35 PU/WH	6816	Indicator Dimming Control (PTO)
N4	--	--	Not Used
N5	0.35 PK	1139	Ignition 1 Voltage
P1	0.35 D-BU	38	Backup Lamp Relay Control (UVC)
P2	0.35 GY	1690	Automatic Day/Night Mirror Signal (HP2 or DL3 with DD8 or DRC)
P3	0.35 PU/WH	6816	Indicator Dimming Control (NQF or NQH)
P4	--	--	Not Used
P5	0.35 D-GN	6101	Low Reference (CJ2)

Junction Block - Left I/P X2 (except MEX)

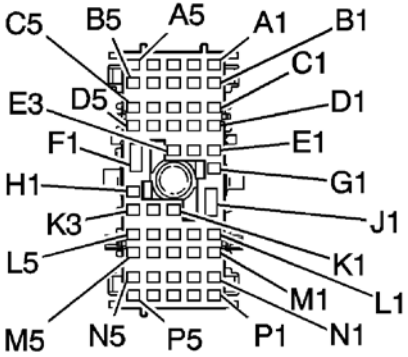
Connector Part Information

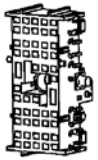
Harness Type: Instrument Panel

OEM Connector: 15467567

Service Connector: 19149284

Description: 50-Way F GT 280 Series (BK)





Terminal Part Information

Pins: A1, A2, A5, B5, C1, C3, D3 (without PTO or EXP or S8S), E1-E3, G1, H1, K2, K3, L3-L5, M3, M5, N1, N3, N5, P1, P3, P5

Terminated Lead: 13575753

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 15304711/8

Core/Insulation Crimp: Pins: A1, A2, B5, C1, C3, E1, E2, E3, G1, H1 (without Y91), K2, K3, L3, L4, M3 (without C67 or C42), N1, N3 (JL1 or HP2), N5, P1, P3, P5 – E/A

Core/Insulation Crimp: Pins: A2 (except YE9, HP2, or YE9 with AN3 or DL3), M3 (with C67 or C42), N3 (PTO), N4, A5, D3 (without PTO or EXP or S8S), H1 (Y91), L5, M5 – 2/A

Pins: D3 (with PTO or EXP or S8S)

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 15304711/8

Core/Insulation Crimp: Not Available

Pins: B1, C2, D1, P4

Terminated Lead: 13575754

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 15304713/19

Core/Insulation Crimp: Pin: D1: 4/4

Core/Insulation Crimp: Pins: B1, C2, P4 – F/D

Pin	Wire	Circuit	Function
A1	0.35 PK	739	Ignition 1 Voltage
A2	0.35 YE	43	Accessory Voltage
	0.35 YE	43	Accessory Voltage (except YE9, HP2, or YE9 with AN3 or DL3)
A3-A4	--	--	Not Used
A5	0.8 RD/WH	1040	Battery Positive Voltage (except Y91 or 853)
B1	3 RD/WH	2340	Battery Positive Voltage
B2-B4	--	--	Not Used
B5	0.5 RD/WH	3240	Battery Positive Voltage (except Y91)
C1	0.5 YE/BK	5813	Park Enable Supply Voltage (YE9 or Y91)
C2	3 BK	2550	Ground (Y91)
C3	0.5 RD/WH	340	Battery Positive Voltage (except Y91 or 853)
C4-C5	--	--	Not Used
D1	2 BK	1050	Ground
D2	--	--	Not Used

(continued on next page)

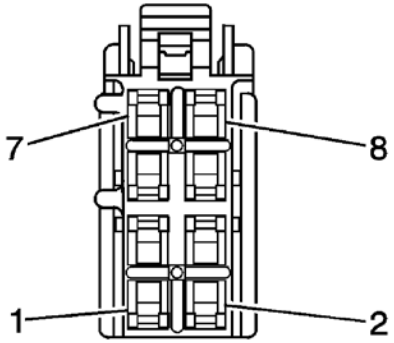
Junction Block - Left I/P X2 (except MEX) (cont'd)

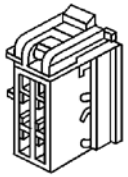
Pin	Wire	Circuit	Function
D3	0.8 RD/WH	4540	Battery Positive Voltage
	0.8 RD/WH	4540	Battery Positive Voltage (PTO or EXP)
	0.5 RD/WH	4540	Battery Positive Voltage (8S8)
D4-D5	--	--	Not Used
E1	0.5 OG/BK	5285	Adjustable Pedals Relay Rearward Control (YE9 or Y91)
E2	0.5 RD/WH	740	Battery Positive Voltage (YE9 or Y91)
E3	0.35 YE	6812	Out of Park Signal (YE9 or Y91)
G1	0.5 PU	5286	Adjustable Pedals Relay Forward Control (YE9 or Y91)
H1	0.35 D-GN/WH	817	Vehicle Speed Signal
	0.5 D-GN/WH	817	Vehicle Speed Signal (Y91)
J1	--	--	Not Used
K1	--	--	Not Used
K2	0.35 YE	6817	LED Backlight Dimming Control
K3	0.35 D-GN	5060	Low Speed GMLAN Serial Data
L1-L2	--	--	Not Used
L3	0.35 YE	6817	LED Backlight Dimming Control (except 853)
L4	0.35 YE	6817	LED Backlight Dimming Control
L5	0.5 TN/BK	2500	High Speed GMLAN Serial Data Bus (+)
	0.5 TN/BK	2500	High Speed GMLAN Serial Data Bus (+)
M1-M2	--	--	Not Used

Pin	Wire	Circuit	Function
M3	0.35 YE	6817	LED Backlight Dimming Control
	0.35 YE	6817	LED Backlight Dimming Control (C67 or C42)
M4	--	--	Not Used
M5	0.5 TN	2501	High Speed GMLAN Serial Data Bus (-)
	0.5 TN	2501	High Speed GMLAN Serial Data Bus (-)
N1	0.35 D-BU	2307	Passenger Air Bag On Indicator Control (AL0 or C99)
N2	--	--	Not Used
N3	0.35 YE	6817	LED Backlight Dimming Control (JL1 or HP2)
	0.35 YE	6817	LED Backlight Dimming Control (PTO)
N4	0.35 YE	6817	LED Backlight Dimming Control
	0.35 YE	6817	LED Backlight Dimming Control
N5	0.5 TN	2501	High Speed GMLAN Serial Data Bus (-)
P1	0.35 PU	5234	Passenger Seat Belt Indicator (AL0 or HP2)
P2	--	--	Not Used
P3	0.35 D-GN	2308	Passenger Air Bag Off Indicator Control (AL0, C99 or HP2)
P4	3 RD/WH	3740	Battery Positive Voltage (except Y91)
P5	0.5 TN/BK	2500	High Speed GMLAN Serial Data Bus (+)

Junction Block - Left I/P X3 (except MEX)

Connector Part Information





Harness Type:
I/P Extension

OEM Connector: 13516840

Service Connector: 13580865

Description: 8-Way F GT 280 Series (GN)

Terminal Part Information

Pins: 1– 3, 5, 7

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 13525970/4

Core/Insulation Crimp: Pins: 1, 3, 5, 7 – E/A

Core/Insulation Crimp: Pin: 2 – 2/A

Pin: 6

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

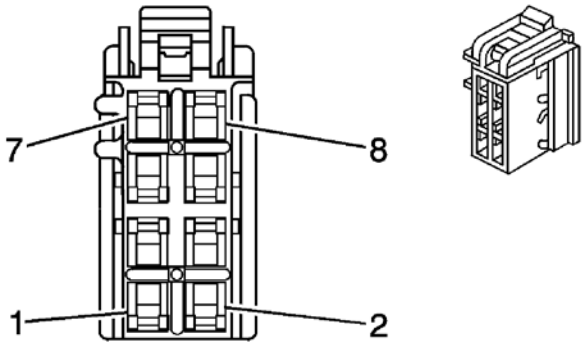
Terminal/Tray: 13525969/4

Core/Insulation Crimp: F/D

Pin	Wire	Circuit	Function
1	0.5 TN/BK	2500	High Speed GMLAN Serial Data Bus (+)
2	0.8 BK	1050	Ground (D07, YE9 or UQA)
3	0.5 TN	2501	High Speed GMLAN Serial Data Bus (-)
4	--	--	Not Used
5	0.5 TN	2501	High Speed GMLAN Serial Data Bus (-)
6	3 RD/WH	3740	Battery Positive Voltage (except Y91)
7	0.5 TN/BK	2500	High Speed GMLAN Serial Data Bus (+)
8	--	--	Not Used

Junction Block - Left I/P X4 (except MEX)

Connector Part Information



Harness Type:
I/P Extension

OEM Connector: 13516829

Service Connector: 19115667

Description: 8-Way F GT 280 Series (OG)

Terminal Part Information

Pins: 4

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 13525969/4

Core/Insulation Crimp: F/D

Pins: 1– 3, 5– 8

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 13525970/4

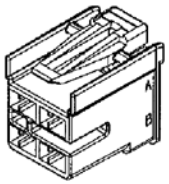
Core/Insulation Crimp: Pins 5, 6, 7– E/A

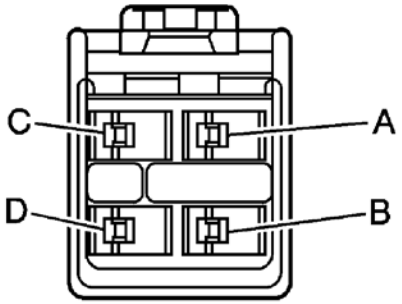
Core/Insulation Crimp: Pins: 1–3, 8– 2/A

Pin	Wire	Circuit	Function
1	0.35 D-GN	5060	Low Speed GMLAN Serial Data (except Y91)
	0.35 D-GN	5060	Low Speed GMLAN Serial Data (except Y91)
2	0.5 RD/WH	340	Battery Positive Voltage (UK6 without Y91)
	0.5 RD/WH	340	Battery Positive Voltage (U2K without Y91)
3	0.8 D-GN/WH	817	Vehicle Speed Signal (UUL or UUK)
4	3 BK	2550	Ground (UQA without Y91)
5	0.5 BK	2550	Ground (UE1 without Y91)
	05 BK	2550	Ground (U2K without Y91)
6	0.5 RD/WH	3240	Battery Positive Voltage (UE1 except Y91)
7	0.5 BK	2550	Ground (U42 without Y91)
8	0.8 RD/WH	1040	Battery Positive Voltage (UQA without Y91)

Junction Block - Left I/P X5 (SPO Alarm or SPO Heated Seats)

Connector Part Information





Harness Type: SPO Theft

OEM Connector: 12194033

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F Metri-Pack 280 Series (CM)

Terminal Part Information

Terminal/Tray: See Terminal Repair Kit

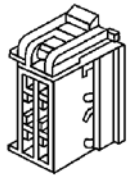
Core/Insulation Crimp: See Terminal Repair Kit

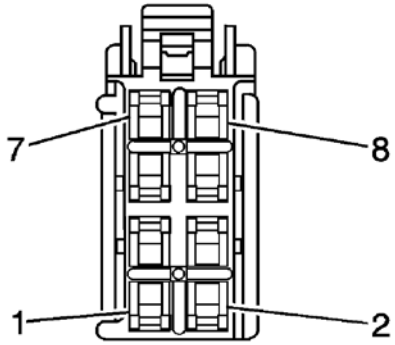
Release Tool/Test Probe: See Terminal Repair Kit

Pin	Wire	Circuit	Function
A-B	--	--	Not Used
C	0.35 D-GN	5060	Low Speed GMLAN Serial Data (SPO Heated Seats)
D	0.5 RD/WH	4540	Battery Positive Voltage (SPO Alarm)

Junction Block - Left I/P X7 (JF4)

Connector Part Information





Harness Type: Pedal Jumper

OEM: 13516836

Service: 19149294

Description: 8-Way F GT 280 Series (OG)

Terminal Part Information

Pins: 1, 3, 5, 2, 4

Terminal/Tray: 13525970/4

Core/Insulation Crimp: Pins 1, 3, 5 – E/A

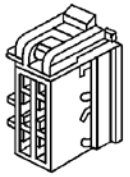
Core/Insulation Crimp: Pins 2, 4 – 2/A

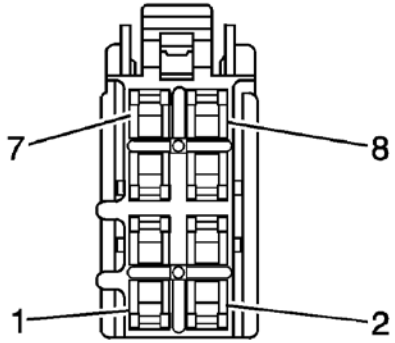
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pin	Wire	Circuit	Function
1	0.5 GY	6206	Low Reference (JF4 with AN3)
2	1 YE	5129	Adjustable Pedals Relay Rearward Control (JF4)
3	0.5 TN	6207	5-Volt Reference (JF4 with AN3)
4	1 PU	5130	Adjustable Pedals Actuator Forward Control (JF4)
5	0.5 PK	5289	Adjustable Pedal Sensor Signal (JF4 with AN3)
6-8	--	--	Not Used

Junction Block - Left I/P X8 (except MEX)

Connector Part Information





Harness Type: Headliner

OEM Connector: 13516835

Service Connector: 19149293

Description: 8-Way F GT 280 Series (GN)

Terminal Part Information

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 13525970/4

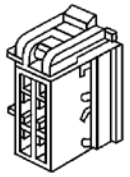
Core/Insulation Crimp: Pin: 3 – 2/A

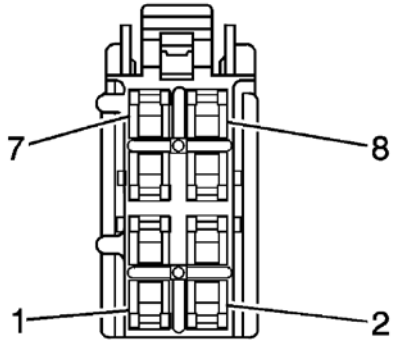
Core/Insulation Crimp: Pins: 4–7 – E/A

Pin	Wire	Circuit	Function
1-2	--	--	Not Used
3	1 BK	1050	Ground
4	0.35 YE	43	Accessory Voltage (A48)
5	0.35 PU	5234	Passenger Seat Belt Indicator (AL0)
6	0.35 D-BU	2307	Passenger Air Bag On Indicator Control (AL0 or C99)
7	0.35 D-GN/BK	2308	Passenger Air Bag Off Indicator Control (AL0 or C99)
8	--	--	Not Used

Junction Block - Left I/P X9 (except MEX)

Connector Part Information





Harness Type: Headliner

OEM Connector: 13516831

Service Connector: 19149289

Description: 8-Way F GT 280 Series (BK)

Terminal Part Information

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 13525970/4

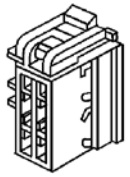
Core/Insulation Crimp: Pins: 1, 8 (Extended or Crew Cab) – 2/A

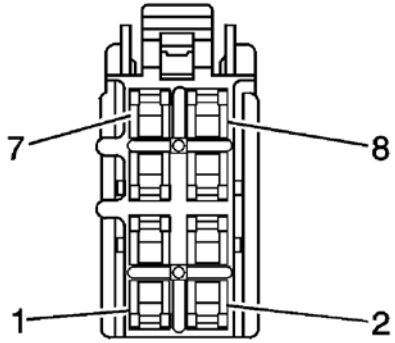
Core/Insulation Crimp: Pins: 2–7, 8 (Standard Cab) – E/A

Pin	Wire	Circuit	Function
1	0.35 PK	1639	Ignition 1 Voltage (DL3 with DD8 or DRC)
	0.35 PK	1639	Ignition 1 Voltage (YE9)
2	0.35 WH/BK	5515	Inside Air Temperature Sensor Assembly Control (CJ2)
3	0.5 OG	1054	Stop Lamp Supply Voltage Signal
4	0.35 D-GN	734	Inside Air Temperature Sensor Signal (CJ2)
5	0.35 PK	1139	Ignition 1 Voltage (AL0 or C99)
6	0.5 WH/BK	158	Courtesy Lamp Supply Voltage
7	0.35 D-GN	6101	Low Reference (CJ2)
8	0.5 GY	157	Courtesy Lamp Control
	0.5 GY	157	Courtesy Lamp Control (Extended Cab or Crew Cab)

Junction Block - Left I/P X10 (except MEX)

Connector Part Information





Harness Type: Headliner

OEM Connector: 13516830

Service Connector: 19149291

Description: 8-Way F GT 280 Series (GY)

Terminal Part Information

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

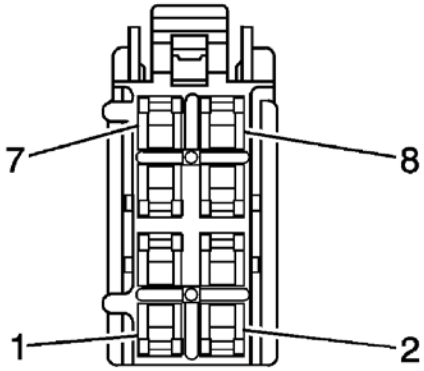
Terminal/Tray: 13525970/4

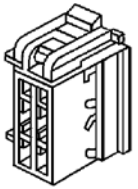
Core/Insulation Crimp: E/A

Pin	Wire	Circuit	Function
1	0.5 RD/WH	240	Battery Positive Voltage (TRW, 5Y0, 5X7 or UG1)
2	0.35 OG	6815	Inadvertent Power Control
	0.35 OG	6815	Inadvertent Power Control (Extended Cab or Crew Cab without YE9)
3	0.35 PK	1691	Low Reference (DL3 with DD8 or DRC)
4	0.35 BN/WH	230	Instrument Panel Lamps Dimming Control
5	--	--	Not Used
6	0.35 D-GN	6134	Linear Interconnect Network Bus (YE9)
7	0.35 GY	1690	Automatic Day/Night Mirror Signal (DL3 with DD8 or DRC)
8	0.35 D-BU	38	Backup Lamp Relay Control (YE9)

Junction Block - Left I/P X11 (except MEX)

Connector Part Information





Harness Type: Body

OEM Connector: 13516833

Service Connector: 13580879

Description: 8-Way F GT 280 Series (L-GY)

Terminal Part Information

Pins: 1-2

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 13525969/4

Core/Insulation Crimp: F/D

Pins: 4-6, 7(AL0 or HP2)

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 13525970/4

Core/Insulation Crimp: E/A

Pins: 7 (without AL0 or HP2)

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

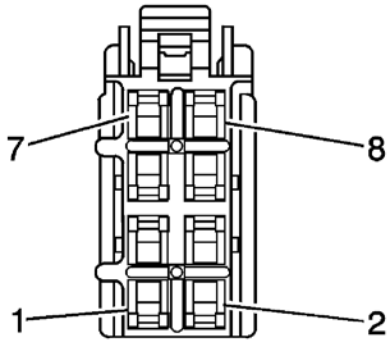
Terminal/Tray: 13525970/4

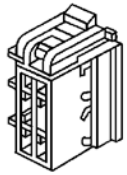
Core/Insulation Crimp: 2/A

Pin	Wire	Circuit	Function
1	3 RD/WH	1340	Battery Positive Voltage (Crew Cab with A31 or HP2, or Extended Cab with ABV)
2	3 RD/WH	1440	Battery Positive Voltage (AG2 or HP2)
3	--	--	Not Used
4	0.5 BN/WH	230	Instrument Panel Lamps Dimming Control (Crew Cab with A31 and Y91)
	0.5 BN/WH	230	Instrument Panel Lamps Dimming Control (Crew Cab with A31 and Y91)
5	0.35 D-BU	38	Backup Lamp Relay Control
6	0.35 PK	1139	Ignition 1 Voltage
7	0.8 RD/WH	4440	Battery Positive Voltage (except AL0 or HP2)
	0.5 RD/WH	4440	Battery Positive Voltage (AL0 or HP2)
	0.5 RD/WH	4440	Battery Positive Voltage (AL0 or HP2)
8	--	--	Not Used

Junction Block - Left I/P X12 (except MEX)

Connector Part Information





Harness Type: Body

OEM Connector: 13516834

Service Connector: 13580866

Description: 8-Way F GT 280 Series (BN)

Terminal Part Information

Pins: 1-2, 8

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 13525969/4

Core/Insulation Crimp: F/D

Pins: 6

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 13525970/4

Core/Insulation Crimp: 2/A

Pins: 7

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

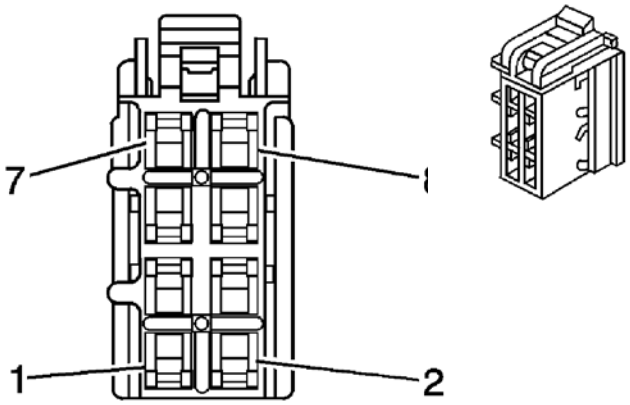
Terminal/Tray: 13525970/4

Core/Insulation Crimp: E/A

Pin	Wire	Circuit	Function
1	3 RD/WH	5040	Battery Positive Voltage (AG1 or HP2)
2	3 RD/WH	3440	Battery Positive Voltage (A48)
3-5	--	--	Not Used
6	1 WH/BK	158	Courtesy Lamp Supply Voltage
7	0.35 PK	239	Ignition Voltage (KB6 except SPO Rearview Camera)
	0.5 PK	1639	Ignition Voltage (KB6 with SPO Rearview Camera)
8	3 BK	2550	Ground

Junction Block - Left I/P X13 (AN3)

Connector Part Information



Harness Type: Body

OEM Connector: 13516832

Service Connector: 19149290

Description: 8-Way F GT 280 Series (D-BU)

Terminal Part Information

Pins: 1-2

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 13525970/4

Core/Insulation Crimp: 2/A

Pins: 3-8

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

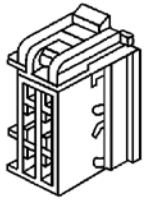
Terminal/Tray: 13525970/4

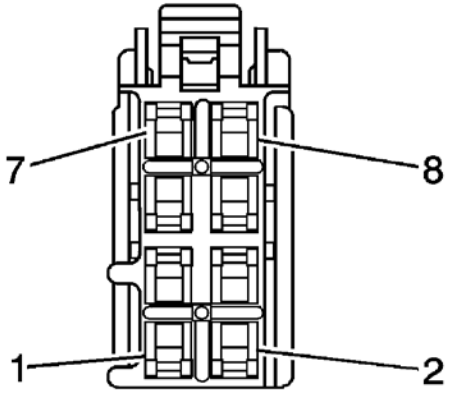
Core/Insulation Crimp: E/A

Pin	Wire	Circuit	Function
1	1 PU	5130	Adjustable Pedals Relay Forward Control
2	1 YE	5129	Adjustable Pedals Relay Rearward Control
3	0.35 PU	5286	Adjustable Pedals Relay Forward Control
4	0.35 OG/BK	5285	Adjustable Pedals Relay Rearward Control
5	0.5 TN	6207	Memory Sensor High Reference
6	0.5 PK	5289	Adjustable Pedal Sensor Signal
7	0.5 GY	6206	Low Reference
8	0.35 PU/WH	6205	12-Volt Reference

Junction Block - Left I/P X14 (5Y0, 5X7, 9L4, SPO DVD or SPO Heated Seats)

Connector Part Information





Harness Type: Brake Clutch

OEM Connector: 13516837

Service Connector: 13504592

Description: 8-Way F GT 280 Series (BK)

Terminal Part Information

Pins: 1 (5Y0 or 5X7), 8 (9L4)

Terminated Lead: Pending

Release Tool: J-38125-553

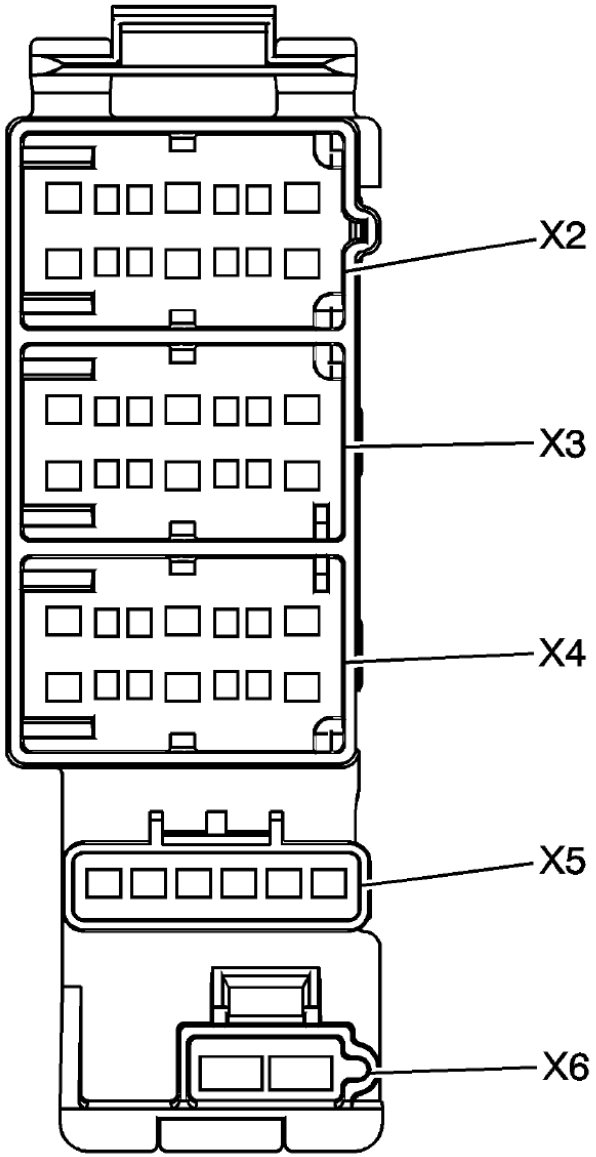
Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 13525970/4

Core/Insulation Crimp: E/A

Pin	Wire	Circuit	Function
1	0.5 BK	1050	Ground (5Y0 or 5X7)
	BK	--	Ground (SPO DVD)
	2 BK	1050	Ground (SPO Heated Seats)
2-4	--	--	Not Used
5	3 RD/WH	2340	Battery Positive Voltage (5Y0)
	2 RD/WH	2340	Battery Positive Voltage (SPO Heated Seats)
6	--	--	Not Used
7	RD	--	Ignition Voltage (SPO DVD)
8	0.5 YE	43	Accessory Voltage (9L4)

Junction Block - Right I/P, Top View



Junction Block - Right I/P (Wire Entry)

Connector Part Information

Harness Type:
Instrument Panel

OEM: 13604154

Service:Pending

Description: 50-Way M GT 150/280 Metri-Pack 630(BK)

Terminal Part Information

Pins: 2A1, 2A4 (except NQH), 2B4, 3A4 (AU3 without YE9), 3B1, 3B4 (AU3 without YE9), 4B7, 5A, 5C, 5D, 5E, 5F

Terminated Lead: 13575507

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-5 (PU)

Terminal/Tray: 15304722/8

Core/Insulation Crimp: E/C

Pins: 2A4 (NQH), 5B

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-5 (PU)

Terminal/Tray: 15304724/8

Core/Insulation Crimp: 2/A

Pins: 3A1

Terminated Lead: 13575507

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-5 (PU)

Terminal/Tray: 15304724/8

Core/Insulation Crimp: 2/A

Pins: 2A7, 2B1, 3A7, 3B4 (A31 or HP2)

Terminated Lead: 13575510

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-5 (PU)

Terminal/Tray: 15304724/8

Core/Insulation Crimp: A/D

Pins: 2A2, 2A3, 2B2, 2B3, 2B6, 3A2, 3A3, 3A5, 3A6, 3B2, 3B3, 3B5, 3B6, 4A2, 4A3, 4A5, 4A6, 4B2, 4B3, 4B5, 4B6

Terminated Lead: 13575502

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-3 (GY)

Terminal/Tray: 15304702/19

Core/Insulation Crimp: Pins: 2A2, 2A3, 2B3, 3A3, 3A5, 3B5, 3B6, 4A2, 4A3, 4A5, 4A6, 4B2, 4B3, 4B5, 4B6 – E/C

Core/Insulation Crimp: Pins: 2B2, 2B6 – E/4

Core/Insulation Crimp: Pins: 3A2, 3A6, 3B2, 3B3 – 2/4

Pins: 4A1, 4A4

Terminated Lead: Pending

Release Tool: No Tool Reqd

Diagnostic Test Probe: No Tool Reqd

Terminal/Tray: 15489492//A

Core/Insulation Crimp: Not Available

(continued on next page)

Junction Block - Right I/P (Wire Entry) (cont'd)

Pins: 3A4 (DL3, DPN or HP2)
Terminated Lead: Pending
Release Tool: J-38125-553
Diagnostic Test Probe: J-35616-5 (PU)
Terminal/Tray: 15304724/8
Core/Insulation Crimp: C/D

Pins: 4A7
Terminated Lead: Pending
Release Tool: No Tool Reqd
Diagnostic Test Probe: No Tool Reqd
Terminal/Tray: 15489493//A
Core/Insulation Crimp: Not Available

Pins: 6A
Terminated Lead: Pending
Release Tool: J-38125-11A
Diagnostic Test Probe: J-35616-43 (RD)
Terminal/Tray: 12066493/3
Core/Insulation Crimp: B/G

Pins: 6B
Terminated Lead: Pending
Release Tool: J-38125-11A
Diagnostic Test Probe: J-35616-43 (RD)
Terminal/Tray: 12066493/3
Core/Insulation Crimp: Not Available

Pin	Wire	Circuit	Function
2A1	0.5 RD/WH	1540	Battery Positive Voltage (U42 or HP2)
2A2	0.35 TN	481	Outside Moisture Signal 1 (10 Series without MEX or 8S8)
2A3	0.35 L-GN	482	Outside Moisture Signal 2 (10 Series without MEX or 8S8)
2A4	0.35 WH	2283	Ignition Voltage (10 Series without MEX or 8S8)
	0.35 WH	2283	Ignition Voltage (NQH)
2A5-2A6	--	--	Not Used
2A7	3 BK	1050	Ground
2B1	3 RD/WH	3140	Battery Positive Voltage (except MEX)
2B2	0.5 BN	2509	Left Front Park Lamps Supply Voltage (except MEX or 8S8)
2B3	0.35 YE	43	Accessory Voltage (except MEX or 8S8)
2B4	0.5 BN/WH	230	Instrument Panel Lamp Dimming Control (except MEX or 8S8)
2B5	0.5 WH	5990	Emergency Lamp Switch Signal (5Y0 or 5X7 except MEX)
2B6	0.5 BK	1050	Ground (except MEX or 8S8)
2B7	0.35 OG	300	Ignition 3 Voltage (EXP with CF5)
3A1	0.8 D-GN	117	Right Front Speaker Output (-)
3A2	0.8 L-GN	200	Right Front Speaker Output (+)
3A3	0.35 BK	1850	Ground (except SLT)
3A4	0.8 D-BU/WH	1315	Right Front Turn Signal Lamp Supply Voltage (DL3, DPN or HP2)
	0.8 D-BU/WH	1315	Right Front Turn Signal Lamp Supply Voltage (DL3, DPN or HP2)
	0.35 L-BU	244	Passenger Door Lock Switch Lock Signal (AU3 without YE9)

(continued on next page)

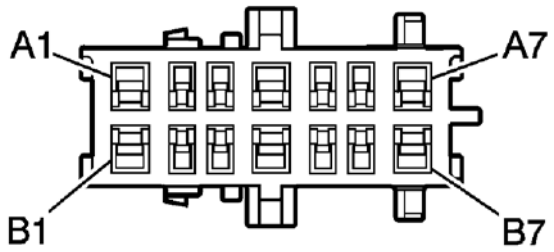
Junction Block - Right I/P (Wire Entry) (cont'd)

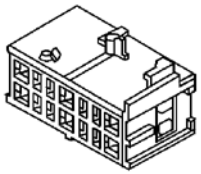
Pin	Wire	Circuit	Function
3A5	0.35 TN/WH	746	Right Front Door Ajar Switch Signal (HP2 or except AN3 or DL3)
3A6	0.8 GY	295	Door Lock Actuator Lock Control (HP2 or AU3 without AN3 or DL3)
3A7	3 BK	1050	Ground
3B1	0.35 D-GN	5060	Low Speed GMLAN Serial Data (HP2 or YE9 with AN3 or DL3)
3B2	0.8 RD/WH	240	Battery Positive Voltage (YE9, Y91 or HP2)
3B3	0.8 TN	294	Door Lock Actuator Unlock Control (HP2 or AU3 without AN3 or DL3)
3B4	2 RD/WH	1340	Battery Positive Voltage (HP2 or A31)
	0.35 D-BU	245	Passenger Door Lock Switch Unlock Signal (AU3 without YE9)
3B5	0.35 BN/WH	230	Instrument Panel Lamps Dimming Control (HP2 or AU3)
3B6	--	--	Not Used
3B7	--	--	Ground Bus
4A1	0.35 GY	598	5-Volt Reference
4A2	0.35 TN	520	Lower Right Air Temperature Sensor Signal (CJ2)
	0.35 TN	552	Low Reference (C67)
4A3	0.35 TN	518	Lower Left Air Temperature Sensor Signal (CJ2)

Pin	Wire	Circuit	Function
4A4	0.35 YE	1791	Low Reference
4A5	0.35 PU	1838	Recirculation Door Position Signal (CJ2)
4A6	0.35 GY/BK	754	Blower Motor Speed Control
4A7	--	--	Ground Bus
4B1	--	--	5-Volt Reference Bus
4B2	0.35 D-BU	1199	Air Temperature Door Control (CJ2)
4B3	0.35 TN	2273	Mode Door Control
4B4	--	--	Low Reference Bus
4B5	0.35 YE/BK	713	Defrost/Heater Mode Valve Position Sensor Signal
4B6	0.35 L-BU	733	Air Temperature Door Position Signal (CJ2)
4B7	0.35 WH	2622	Evaporator Temperature Sensor Signal (except HP2)
5A	0.35 D-GN	6101	Low Reference (CJ2)
5B	0.35 PK	839	Ignition 1 Voltage
5C	0/35 PK	839	Ignition 1 Voltage
	0/35 PK	839	Ignition 1 Voltage
5D	0.35 D-BU	1646	Auxiliary Air Temperature Door Position Signal
5E	0.35 WH/BK	1236	Auxiliary Air Temperature Door Control
5F	0.35 D-GN	1614	Recirculation Door Control (MEX except C42 or except MEX)
6A	5 RD/BK	542	Battery Positive Voltage
6B	3 BK	1050	Ground

Junction Block - Right I/P X2

Connector Part Information





Harness Type: Right A-Pillar

OEM Connector: 15467621

Service Connector: 19115663

Description: 14-Way F GT 150/280 Series (GY)

Terminal Part Information

Pins: B2, B3

Terminal/Tray: 12191812/19

Core/Insulation Crimp: E/C

Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pins: A7, B1

Terminal/Tray: 15304713/19

Core/Insulation Crimp: F/D

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: A7, B4

Terminal/Tray: 15304711/8

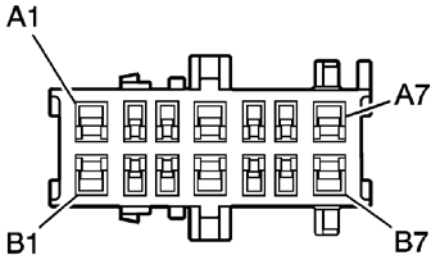
Core/Insulation Crimp: E/A

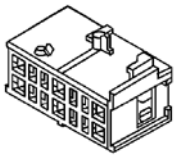
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pin	Wire	Circuit	Function
A1	0.5 RD/WH	1540	Battery Positive Voltage (U42)
A2-A6	--	--	Not Used
A7	3 BK	1050	Ground (CF5 or TRW)
	0.5 BK	1050	Ground (U01)
B1	3 RD/WH	3140	Battery Positive Voltage (CF5 or TRW)
B2	0.5 BN	2509	Left Front Park Lamps Supply Voltage (U01)
B3	0.35 YE	43	Accessory Voltage (CF5)
B4	0.5 BN/WH	230	Instrument Panel Lamps Dimming Control (CF5)
B5	0.5 WH	5990	Emergency Lamp Switch Signal (5Y0 or 5X7)
B6-B7	--	--	Not Used

Junction Block - Right I/P X3

Connector Part Information





Harness Type:
Right Front Door

OEM Connector: 15467622

Service Connector: 19115664

Description: 14-Way F GT 150/280 Series (L-GY)

Terminal Part Information

Pins: A1 (UQ3 or UQ5)

Pins: A4, B1, B4

Terminated Lead: 13575753

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 15304711/8

Core/Insulation Crimp: E/A

Pins: A1 (UQA)

Terminated Lead: 13575753

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 15304711/8

Core/Insulation Crimp: 2/A

Pins: A2 (UQ3 or UQ5)

Pins: A3, A5, B5, B6

Terminated Lead: 13575735

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-2A (GY)

Terminal/Tray: 12191812/19

Core/Insulation Crimp: E/C Pins: A2 (UQA)

Pins: A6, B2, B3

Terminated Lead: 13575735

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-2A (GY)

Terminal/Tray: 12191812/19

Core/Insulation Crimp: C/A

Pins: A7, B4, A7

Terminated Lead: 13575754

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 15304713/19

Core/Insulation Crimp: Pins A7, B4 – 4/4

Core/Insulation Crimp: Pins A7 – F/D

Pin	Wire	Circuit	Function
A1	0.8 D-GN	117	Right Front Speaker Output (-) (UQA)
	0.5 D-GN	117	Right Front Speaker Output (-) (UQ3 or UQ5)

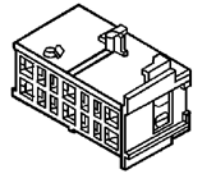
Junction Block - Right I/P X3 (cont'd)

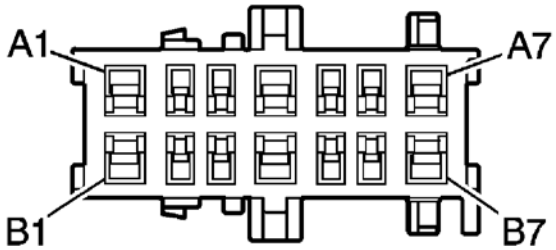
Pin	Wire	Circuit	Function
A2	0.8 L-GN	200	Right Front Speaker Output (+) (UQA)
	0.5 L-GN	200	Right Front Speaker Output (+) (UQ3 or UQ5)
A3	0.35 BK	1850	Ground (except AN3 or DL3)
A4	0.5 D-BU/WH	1315	Right Front Turn Signal Lamp Supply Voltage (DL3 or DPN)
	0.35 L-BU	244	Passenger Door Lock Switch Lock Signal (AU3 without YE9)
A5	0.35 TN/WH	746	Right Front Door Ajar Switch Signal (except AN3 or DL3)
A6	1 GY	295	Door Lock Actuator Lock Control (AU3 without AN3 or DL3)
A7	2 BK	1050	Ground (without AN3/DL3)
	3 BK	1050	Ground (A31, AN3, DL3, DL8 or DPN)

Pin	Wire	Circuit	Function
B1	0.35 D-GN	5060	Low Speed GMLAN Serial Data (AN3 or DL3)
B2	0.8 RD/WH	240	Battery Positive Voltage (AN3 or DL3)
B3	1 TN	294	Door Lock Actuator Unlock Control (AU3 without AN3 or DL3)
B4	2 RD/WH	1340	Battery Positive Voltage (A31)
	0.35 D-BU	245	Passenger Door Lock Switch Unlock Signal (AU3 without YE9)
B5	0.35 BN/WH	230	Instrument Panel Lamps Dimming Control (AU3 without AN3 or DL3)
B6-B7	--	--	Not Used

Junction Block - Right I/P X4

Connector Part Information





Harness Type: Front HVAC Module

OEM Connector: 15467620

Service Connector: 19115662

Description: 14-Way F GT 150 280 Series (BK)

Terminal Part Information

Pins: A1, A4, B1, B4

Terminated Lead: 13575753

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 15304711/8

Core/Insulation Crimp: E/A

Pins: A2, A3, A5, A6, B2, B3, B5, B6, B7

Terminated Lead: 13575735

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-2A (GY)

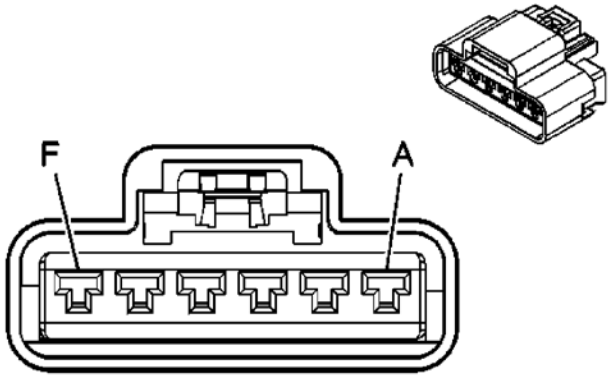
Terminal/Tray: 12191812/19

Core/Insulation Crimp: E/C

Pin	Wire	Circuit	Function
A1	0.35 L-BU/BK	598	5-Volt Reference
	0.35 L-BU/BK	598	5-Volt Reference (C67 or CJ2)
A2	0.35 GY/BK	520	Lower Right Air Temperature Sensor Signal (CJ2)
	0.35 TN	552	Low Reference (C67)
A3	0.35 WH/BK	518	Lower Left Air Temperature Sensor Signal (CJ2)
A4	0.35 YE	1791	Low Reference
	0.35 YE	1791	Low Reference (C67 or CJ2)
A5	0.35 PU	1838	Recirculation Door Position Signal (CJ2)
A6	0.35 PU/WH	754	Blower Motor Speed Control
A7	--	--	Not Used
B1	0.35 L-BU/BK	598	5-Volt Reference
	0.35 L-BU/BK	598	5-Volt Reference (CJ2)
B2	0.35 D-BU	1199	Left Air Temperature Door Control (CJ2)
B3	0.35 TN	2273	Mode Door Control
B4	0.35 YE	1791	Low Reference
	0.35 YE	1791	Low Reference (CJ2)
B5	0.35 L-GN	713	Mode Door Position Signal
B6	0.35 L-BU	733	Left Air Temperature Door Position Signal (CJ2)
B7	0.35 WH	2622	Evaporator Temperature Sensor Signal (except HP2)

Junction Block - Right I/P X5

Connector Part Information



Harness Type: Front HVAC Module

OEM Connector: 15326900

Service Connector: 13580860

Description: 6-Way F GT 280 Series (BK)

Terminal Part Information

Terminated Lead: 13575753

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

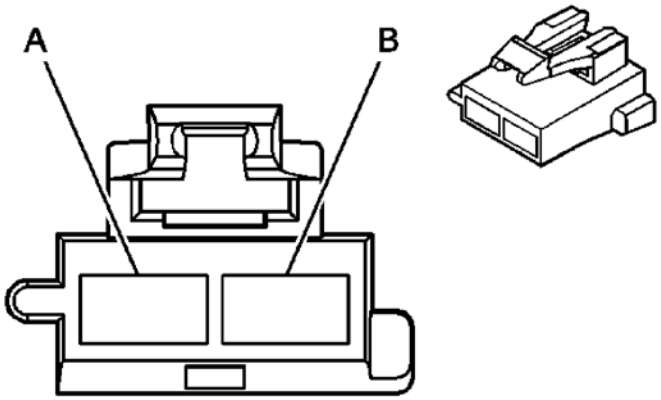
Terminal/Tray: 15304711/8

Core/Insulation Crimp: E/A

Pin	Wire	Circuit	Function
A	0.35 BN	6101	Low Reference (CJ2)
B	0.35 BN	839	Ignition 1 Voltage
	0.35 BN	839	Ignition 1 Voltage (C67 or CJ2)
C	0.35 BN	839	Ignition 1 Voltage
	0.35 BN	839	Ignition 1 Voltage (CJ2)
D	0.35 D-BU	1646	Right Air Temperature Door Position Signal
E	0.35 WH/BK	1236	Right Air Temperature Door Control
F	0.35 D-GN	1614	Recirculation Door Control (C67 or CJ2)

Junction Block - Right I/P X6

Connector Part Information



Harness Type: Front HVAC Module

OEM Connector: 12129939

Service Connector: 12129939

Description: 2-Way F Metri-Pack 630 Series (BK)

Terminal Part Information

Terminated Lead: Pending

Release Tool: J-38125-11A

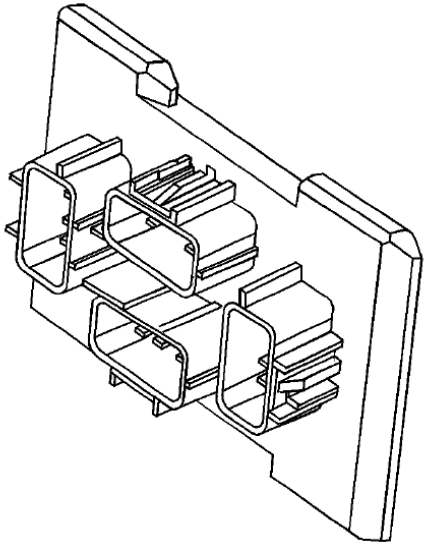
Diagnostic Test Probe: J-35616-42 (RD)

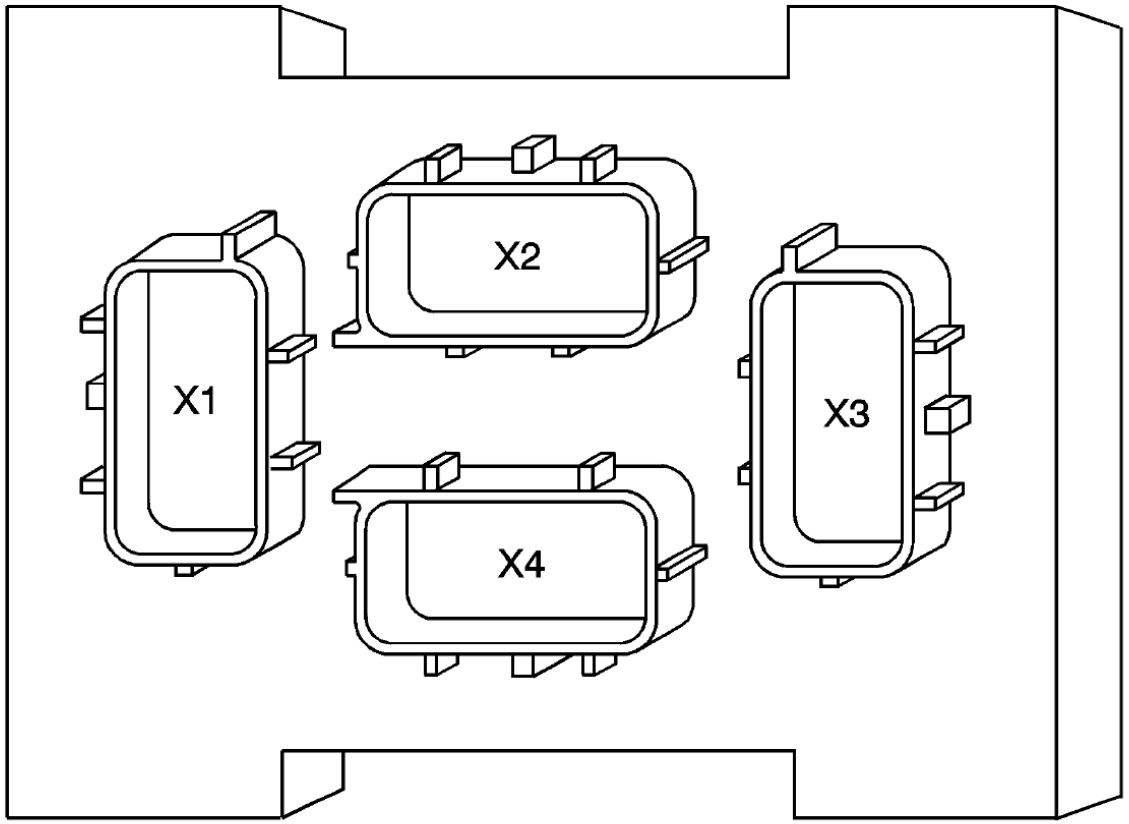
Terminal/Tray: 12084590/3

Core/Insulation Crimp: F/G

Pin	Wire	Circuit	Function
A	3 RD	542	Battery Positive Voltage
B	3 BK	1050	Ground

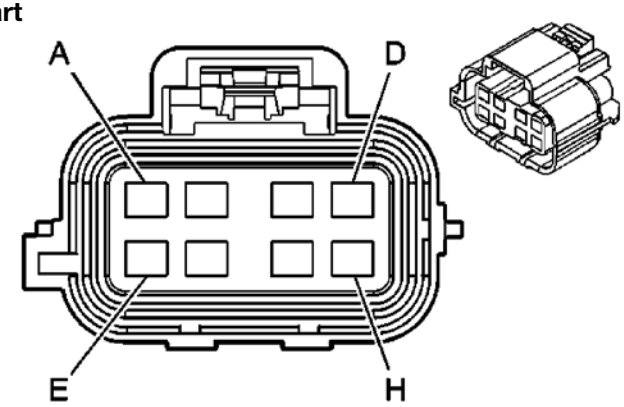
Junction Block - Rear Lamps





Junction Block - Rear Lamps X1

Connector Part Information



Harness Type: Chassis

OEM Connector: 15317304

Service Connector: 19167008

Description: 8-Way F GT 280 Sealed (BU)

Terminal Part Information

Pins: A, C, D, G, H

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 15304716/8

Core/Insulation Crimp: 2/1

Pins: B, E

Terminated Lead: Pending

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

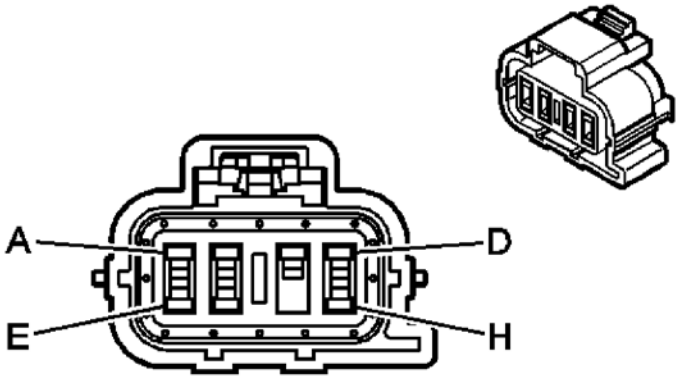
Terminal/Tray: 15304717/8

Core/Insulation Crimp: 4/1

Pin	Wire	Circuit	Function
A	0.8 YE	18	Left Rear Stop/Turn Lamp Supply Voltage
B	2 BK	2150	Ground
C	0.8 L-GN	24	Backup Lamp Supply Voltage
D	0.8 BN	2609	Right Rear Park Lamps Supply Voltage
E	2 BK	1750	Ground (except MEX)
	3 BK	1750	Ground (MEX)
F	--	--	Not Used
G	0.8 BN	2509	Left Rear Park Lamps Supply Voltage
H	0.8 D-GN	19	Right Rear Stop/Turn Lamp Supply Voltage

Junction Block - Rear Lamps X2

Connector Part Information



Harness Type: Rear Bumper

OEM Connector: 15317305

Service Connector: 15306338

Description: 8-Way F GT 280 Sealed (GY)

Terminal Part Information

Pins: A, C, D, G, H

Terminal/Tray: 15304716/8

Core/Insulation Crimp: 2/1

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: B, E

Terminal/Tray: 15304717/8

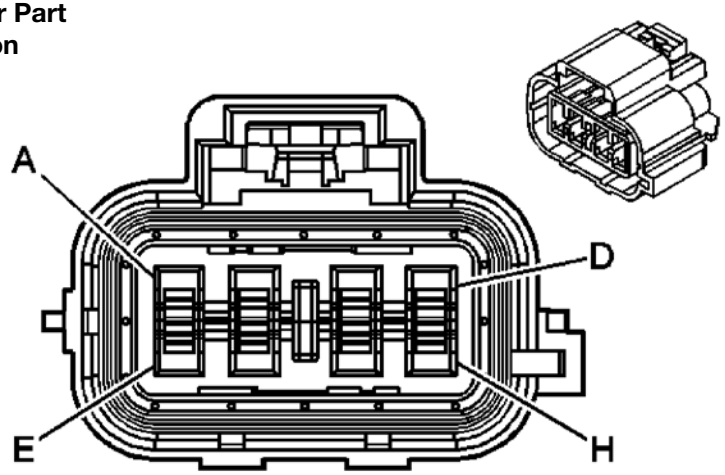
Core/Insulation Crimp: 4/1

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pin	Wire	Circuit	Function
A-B	--	--	Not Used
C	0.8 BK	1750	Ground
D	--	--	Not Used
E	0.8 BN	2509	Left Rear Park Lamps Supply Voltage
F	0.8 L-GN	24	Backup Lamp Supply Voltage
G	--	--	Not Used
H	0.8 YE	18	Left Rear Stop/Turn Lamp Supply Voltage

Junction Block - Rear Lamps X3

Connector Part Information



Harness Type: Rear Bumper

OEM Connector: 15317308

Service Connector: 15306135

Description: 8-Way F GT 280 Sealed 5.2 (BN)

Terminal Part Information

Terminal/Tray: 15304716/8

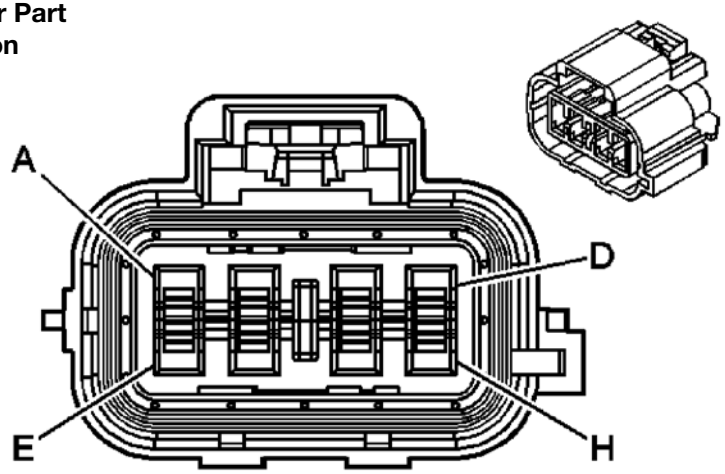
Core/Insulation Crimp: E/1

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pin	Wire	Circuit	Function
A	0.5 BN	2609	Right Rear Park Lamps Supply Voltage
B	0.5 BN	2609	Right Rear Park Lamps Supply Voltage (R05)
C	0.5 BK	1750	Ground (R05)
D	0.5 BK	1750	Ground (R05)
E	0.5 BK	1750	Ground
F	0.5 BN	2509	Left Rear Park Lamps Supply Voltage (R05)
G	0.5 BN	2509	Left Rear Park Lamps Supply Voltage
H	0.5 BK	1750	Ground

Junction Block - Rear Lamps X4

Connector Part Information



Harness Type: Rear Bumper

OEM Connector: 15317306

Service Connector: 15306339

Description: 8-Way F GT 280 Sealed 5.2 (BK)

Terminal Part Information

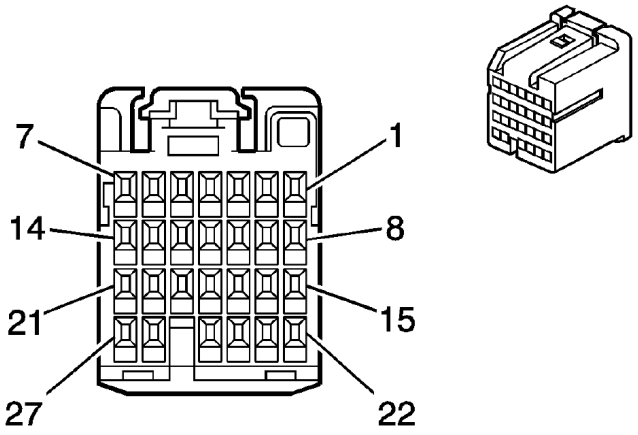
Terminal/Tray: 15304716/8

Core/Insulation Crimp: E/1

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pin	Wire	Circuit	Function
A	0.8 BK	2150	Ground
B	0.8 BN	2609	Right Rear Park Lamps Supply Voltage
C-D	--	--	Not Used
E	0.8 L-GN	24	Backup Lamp Supply Voltage
F	0.8 D-GN	19	Right Rear Stop/Turn Lamp Supply Voltage
G-H	--	--	Not Used

Body Control Module (BCM) X1

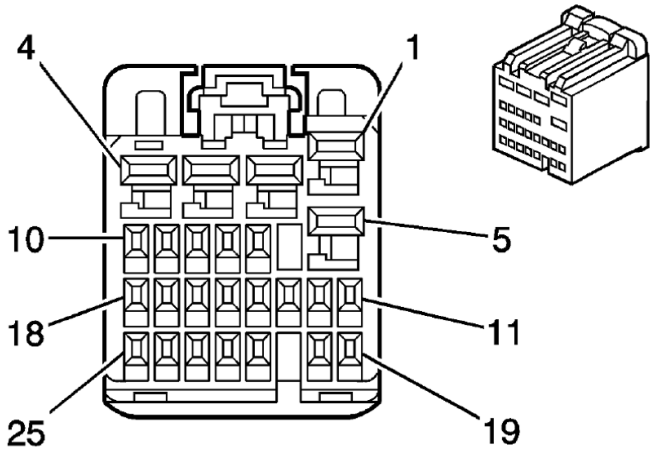


Connector Part Information
Harness Type: Steering Column
OEM Connector: 15482789
Service Connector: 88988838
Description: 27-Way F Receptacle 0.64 2.8 (L-GN)

Terminal Part Information
Pins: 1-9, 14-21, 23-26
Terminal/Tray: SNAC3-A021T-M0.64/20
Core/Insulation Crimp: J/J
Release Tool/Test Probe: 12094429/J-35616-64B (L-BU)

Pin	Wire Color	Circuit No.	Function
1	--	--	Not Used
2	0.35 PK/BK	1020	Ignition 3 Voltage
3	0.35 GY	1884	Cruise Control Switch Signal (K34)
4	0.35 WH	530	5-Volt Reference
5	0.35 L-GN	1715	Windshield Wiper Switch High Signal
6	0.35 L-GN	6818	Steering Wheel Control Switch Signal (UK3)
7	--	--	Not Used
8	0.35 TN/BK	6009	Low Reference
9	0.35 L-BU	1714	Windshield Wiper Switch Low Signal
10-13	--	--	Not Used
14	0.35 PK	3	Ignition 1 Voltage
15	0.35 D-GN	663	Hazard Switch Left Turn Signal
16	0.35 TN	664	Hazard Switch Right Turn Signal
17	0.35 PK	1444	12-Volt Reference
18	0.35 YE	525	Headlamp Dimmer Switch Signal
19	0.35 WH	111	Hazard Switch Signal
20	0.5 PU	5526	Tap Up/Tap Down Switch Signal (MYC, MYD, M99 or MW7)
21	0.35 BN	4	Accessory Voltage
22	--	--	Not Used
23	0.35 L-BU	553	Tow/Haul Switch Signal (MYC, MYD, M99 or MW7)
24	0.35 PK	94	Windshield Washer Switch Signal
25	0.35 YE/BK	307	Headlamp Flash to Pass Signal
26	0.35 TN/WH	816	A/T Shift Lock Solenoid Supply Voltage
27	--	--	Not Used

Body Control Module (BCM) X2



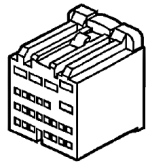
Connector Part Information
Harness Type: Instrument Panel
OEM Connector: 15482790
Service Connector: 88988839
Description: 25-Way F HIT Series (NA)

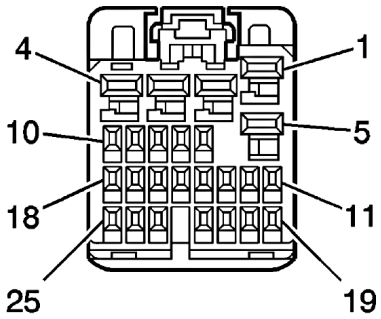
Terminal Part Information
Pins: 1-3, 5
Terminated Lead: 13327199
Release Tool: J-38125-12A
Diagnostic Test Probe: J-35616-35 (VT)
Terminal/Tray: SNAC-A061T-M2.8/20
Core/Insulation Crimp: E/A

Pins: 8, 11-12, 17-18, 21-22, 25
Terminated Lead: 13575870
Release Tool: J-38125-12A
Diagnostic Test Probe: J-35616-64B (L-BU)
Terminal/Tray: SNAC3-A021T-M0.64/20
Core/Insulation Crimp: J/J

Pin	Wire Color	Circuit No.	Function
1	0.5 OG	6815	Inadvertent Power Supply Voltage
2	0.5 RD/WH	2540	Battery Positive Voltage
3	0.5 BN/WH	230	Instrument Panel Lamps Dimming Control
4	--	--	Not Used
5	0.5 GY	157	Courtesy Lamp Control
6-7	--	--	Not Used
8	0.35 L-BU	13	Headlamp Switch Park Lamps Signal
9-10	--	--	Not Used
11	0.35 WH	278	Ambient Light Sensor Signal
12	0.35 WH	103	Headlamp Switch Headlamps On Signal
13-16	--	--	Not Used
17	0.35 D-GN	306	Headlamp Switch Headlamps Off Signal
18	0.35 D-BU/WH	149	Courtesy Lamp Supply Voltage
19-20	--	--	Not Used
21	0.35 L-BU	1788	Traction Control Switch Signal (JL4)
22	0.35 YE	43	Accessory Voltage (except MEX)
23-24	--	--	Not Used
25	0.35 PU	328	Interior Lamp Defeat Switch Signal

Body Control Module (BCM) X3





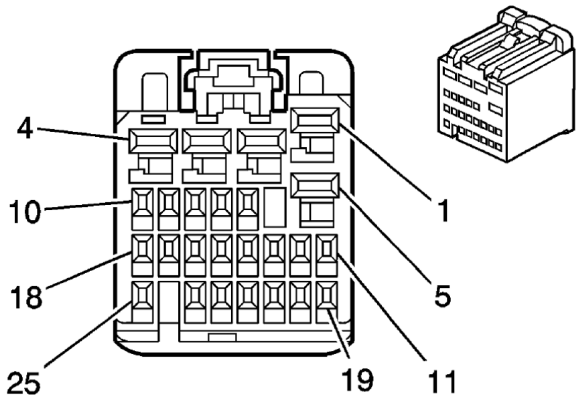
Connector Part Information
Harness Type: Instrument Panel
OEM Connector: 15482791
Service Connector: 88988840
Description: 25-Way F HIT Series (L-BU)

Terminal Part Information
Pins: 1-3, 5
Terminated Lead: 13327199
Release Tool: J-38125-12A
Diagnostic Test Probe: J-35616-35 (VT)
Terminal/Tray: SNAC-A061T-M2.8/20
Core/Insulation Crimp: Pins: 1-3, 5 (MEX) - E/A
Core/Insulation Crimp: Pin: 5 (except MEX) - C/A

Pins: 7-15, 16-19, 21, 22, 25
Terminated Lead: 13575870
Release Tool: J-38125-12A
Diagnostic Test Probe: J-35616-64B (L-BU)
Terminal/Tray: SNAC3-A021T-M0.64/20
Core/Insulation Crimp: J/J

Pin	Wire Color	Circuit No.	Function
1	0.8 BK/WH	1851	Ground (MEX)
2	0.8 RD/WH	2140	Battery Positive Voltage (except HP2 or except 8S8)
	0.5 RD/WH	2140	Battery positive Voltage (HP2 or 8S8)
3	0.5 RD/WH	3840	Battery Positive Voltage
4	--	--	Not Used
5	0.8 BK/WH	1851	Ground (MEX)
	1 BK/WH	1851	Ground (except MEX)
6	--	--	Not Used
7	0.5 GY	728	Security Indicator Control (SPO Alarm)
8	0.5 TN/BK	2500	High Speed GMLAN Serial Data Bus (+)
9	0.5 TN	2501	High Speed GMLAN Serial Data Bus (-)
10	0.35 D-GN	5060	Low Speed GMLAN Serial Data
11	0.35 D-GN	44	Instrument Panel Lamp Dimmer Switch Signal
12	0.35 OG/WH	812	12-Volt Reference
13	0.35 L-GN	526	Stop Lamp Switch Signal
14	0.35 TN	552	Sensor Low Reference
15	0.35 GY	598	5 Volt Reference
16	0.5 TN/BK	2500	High Speed GMLAN Serial Data Bus (+)
17	0.5 TN	2501	High Speed GMLAN Serial Data Bus (-)
18	0.35 YE	6817	LED Backlight Dimming Control
19	0.35 L-BU	5986	Serial Data Communication Enable (except MEX)
20	--	--	Not Used
21	0.35 OG	192	Front Fog Lamp Switch Signal/ Fog Lamps Enable (T96)
22	0.35 L-GN/ WH	7158	Cruise Control Indicator Dimming Signal (except MEX)
23-24	--	--	Not Used
25	0.35 PU/WH	6816	Indicator Dimming Control (except MEX)

Body Control Module (BCM) X4



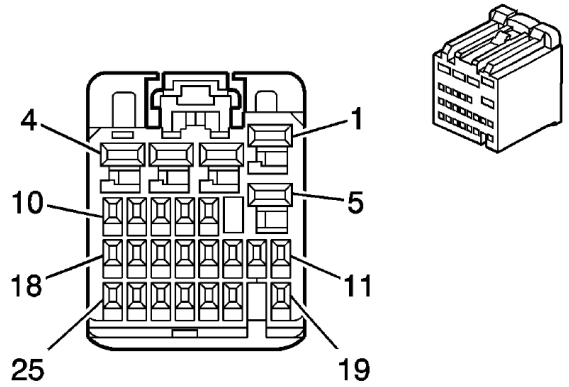
Connector Part Information
Harness: Instrument Panel
OEM: 15482792
Service: 88988841
Description: 25-Way F HIT Series (BK)

Terminal Part Information
Pins: 1-5
Terminal/Tray: SNAC-A061T-M2.8/20
Core/Insulation Crimp: E/A
Release Tool/Test Probe: 12094429/J-35616-4A (PU)

Pins: 6, 7, 9-21, 23
Terminal/Tray: SNAC3-A021T-M0.64/20
Core/Insulation Crimp: J/J
Release Tool/Test Probe: 12094429/J-35616-64B (L-BU)

Pin	Wire Color	Circuit No.	Function
1	0.8 RD/WH	2740	Battery Positive Voltage
2	0.8 RD/WH	3040	Battery Positive Voltage
3	0.8 RD/WH	2940	Battery Positive Voltage
4	0.8 RD/WH	2240	Battery Positive Voltage
5	0.5 D-BU/WH	1315	Right Front Turn Signal Lamp Supply Voltage (except HP2)
	0.8 D-BU/WH	1315	Right Front Turn Signal lamp Supply Voltage (HP2)
6	0.35 D-GN	6134	Linear Interconnect Network Bus (YE9, Y91 or HP2)
7	0.35 YE	196	Windshield Wiper Motor Park Switch Signal
8	--	--	Not Used
9	0.5 BK/WH	451	Ground (except MEX)
10	0.35 RD/WH	2840	Battery Positive Voltage (except MEX)
11	0.35 D-GN/WH	1317	Fog Lamp Relay Control (T96 or HP2)
12	0.35 YE	5187	Right Trailer Turn Signal Lamp (except TZ0)
	0.5 PU	16	Turn Signal Flasher Signal (TZ0)
13	0.35 OG	5186	Left Trailer Turn Signal Lamp (except TZ0)
	0.5 PU	16	Turn Signal Flasher Signal (TZ0)
14	--	--	Not Used
15	0.5 OG	2268	Windshield Washer Relay Control
16	0.35 TN/WH	1969	Headlamp High Beam Relay Control
17	0.35 PK/BK	109	Hood Ajar Switch Signal (AP3 or AP8)
18	--	--	Not Used
19	0.35 D-BU	5985	Accessory Wakeup Serial Data
20	0.35 D-GN/WH	3438	Exhaust Brake Switch Signal (K40)
21	0.35 YE	5199	Run/Crank Relay Coil Control
22	--	--	Not Used
23	0.35 L-GN/BK	592	DRL Relay Control (except MEX)
24-25	--	--	Not Used

Body Control Module (BCM) X5



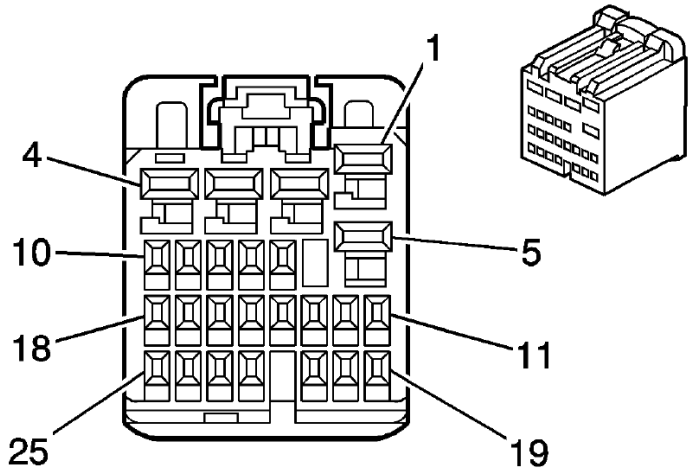
Connector Part Information
Harness Type: Instrument Panel
OEM Connector: 15480179
Service Connector: 88988837
Description: 25-Way F HIT Series (BN)

Terminal Part Information
Pins: 1, 2, 4, 5
Terminated Lead: 13327199
Release Tool: J-38125-12A
Diagnostic Test Probe: J-35616-35 (VT)
Terminal/Tray: SNAC-A061T-M2.8/20
Core/Insulation Crimp: Pin: 1, 2 -C/A
Core/Insulation Crimp: Pins: 4, 5 - E/A

Pins: 6, 7-11, 13-16, 18-21, 23-24
Terminated Lead: 13575870
Release Tool: J-38125-12A
Diagnostic Test Probe: J-35616-64B (L-BU)
Terminal/Tray: SNAC3-A021T-M0.64/20
Core/Insulation Crimp: J/J

Pin	Wire Color	Circuit No.	Function
1	1 YE	18	Left Rear Stop/Turn Lamp Supply Voltage
2	1 D-GN	19	Right Rear Stop/Turn Lamp Supply Voltage
3	--	--	Not Used
4	0.5 L-BU/WH	1314	Left Front Turn Signal Lamp Supply Voltage
5	0.5 L-BU	1320	CHMSL Supply Voltage/Stop Lamp Supply Voltage
6	0.35 L-BU/WH	6311	Cruise/ETC/TCC Brake Signal
7	--	--	Not Used
8	0.5 PK	5076	Current Sensor Supply Voltage (10 Series except MEX)
9	0.5 WH	5075	Current Sensor Signal (10 Series except MEX)
10	0.5 BN	5077	Low Reference (10 Series except MEX)
11	0.35 D-BU	38	Backup Lamp Relay Control
12	--	--	Not Used
13	0.35 OG	300	Ignition 3 Voltage
14	0.35 WH	2283	12-Volt Reference (NQF, NQH or 10 Series except MEX or except 8S8)
15	0.35 PU	5531	Hood Closed Switch Signal (AP3 or AP8)
16	0.35 L-BU	1134	Park Brake Switch Signal (Park brake systems only)
17	--	--	Not Used
18	0.35 TN	28	Horn Relay Control (except MEX)
19	0.35 YE	6812	Out of Park Signal (YE9 or HP2)
20	0.35 GY	91	Windshield Wiper Switch Signal 2
21	0.35 TN	860	Front Windshield Wiper Switch High Signal Control
22	--	--	Not Used
23	0.35 PK/WH	1970	Headlamp Low Beam Relay Control
24	0.35 D-BU	45	Park Lamp Relay Control
25	--	--	Not Used

Body Control Module (BCM) X6



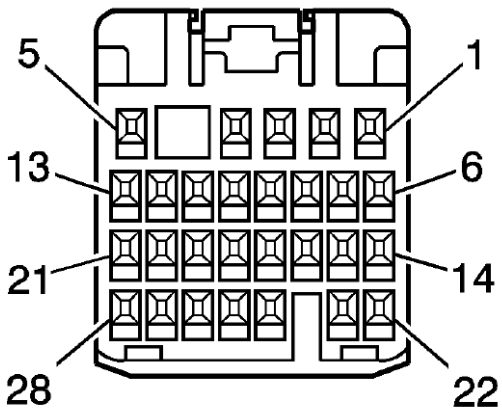
Connector Part Information
Harness Type: Body
OEM Connector: 15482793
Service Connector: 88988842
Description: 25-Way F HIT Series (PK)

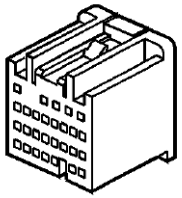
Terminal Part Information
Pins: 2
Terminated Lead: 13327199
Release Tool: J-38125-12A
Diagnostic Test Probe: J-35616-35 (VT)
Terminal/Tray: SNAC-A061T-M2.8/20
Core/Insulation Crimp: C/A

Pins: 8-10, 14-16, 18, 20, 22-23
Terminated Lead: 13575870
Release Tool: J-38125-12A
Diagnostic Test Probe: J-35616-64B (L-BU)
Terminal/Tray: SNAC3-A021T-M0.64/20
Core/Insulation Crimp: J/J

Pin	Wire Color	Circuit No.	Function
1	--	--	Not Used
2	1 WH/BK	158	Courtesy Lamp Supply Voltage
3-7	--	--	Not Used
8	0.35 TN/WH	746	Right Front Door Ajar Switch Signal (except AN3 or DL3)
9	0.35 D-BU	245	Passenger Door Lock Switch Unlock Signal (YE9 without AN3 or DL3 or except YE9, MEX or A52)
10	0.35 GY/BK	745	Left Front Door Ajar Switch Signal (except AN3 or DL3)
11-13	--	--	Not Used
14	0.35 L-GN/BK	748	Right Rear Door Ajar Switch Signal (Crew Cab)
15	0.35 L-BU/BK	747	Left Rear Door Ajar Switch Signal (Crew Cab)
16	0.35 OG	5922	Passenger Door Open Switch Signal (MEX or A52)
17	--	--	Not Used
18	0.35 L-BU	244	Passenger Door Lock Switch Lock Signal (YE9 without AN3 or DL3 or except YE9, MEX or A52)
19	--	--	Not Used
20	0.35 L-GN	262	Driver Door Key Switch Signal (AU3 without AN3 or DL3)
21	--	--	Not Used
22	0.35 TN	126	Front Door Open Switch Signal (MEX or A52)
23	0.35 YE	5058	Intrusion Sensor Armed Signal (SPO Alarm)
24-25	--	--	Not Used

Body Control Module (BCM) X7 (except MEX or A52)





Connector Part Information
Harness Type: Body
OEM Connector: 15466053
Service Connector: 88988806
Description: 28-Way F HIT Series (GY)

Terminal Part Information
Terminated Lead: 13575870
Release Tool: J-38125-12A
Diagnostic Test Probe: J-35616-64B (L-BU)
Terminal/Tray: SNAC3-A021T-M0.64/20
Core/Insulation Crimp: J/J

Pin	Wire Color	Circuit No.	Function
1	--	--	Not Used
2	0.35 D-BU	38	Backup Lamp Relay Control (UVC)
	0.5 L-GN	38	Backup Lamp Relay Control (SPO Rearview Camera)
3-5	--	--	Not Used
6	0.35 L-BU	5921	Driver Door Unlock Relay Control (except AN3 or DL3)
7	0.35 L-BU	195	Door Lock Control
8	--	--	Not Used
9	0.35 WH	194	Door Unlock Control
10	0.35 L-GN	2081	Exhaust Brake Switch Control (K40)
11	0.35 OG/BK	781	Driver Door Lock Switch Unlock Signal (YE9 without AN3 or DL3, or except YE9)
12	0.35 PK/BK	780	Driver Door Lock Switch Lock Signal (YE9 without AN3 or DL3, or except YE9)
13-14	--	--	Not Used
15	0.5 PU	5059	Intrusion Sensor Alarm ON Signal (SPO Alarm)
16-17	--	--	Not Used
18	0.35 L-GN	170	Power Window Master Switch Right Rear Up Signal (AN3 or DL3 with Crew Cab and with A31 or HP2, or Extended Cab with ABV)
19	0.35 PU	169	Power Window Master Switch Left Rear Down Signal (AN3 or DL3 with Crew Cab and with A31 or HP2, or Extended Cab with ABV)
20	--	--	Not Used
21	0.35 D-BU	1307	Power Window Master Switch Lockout Signal (AN3 or DL3 with Crew Cab and with A31 or HP2, or Extended Cab with ABV)
22-25	--	--	Not Used

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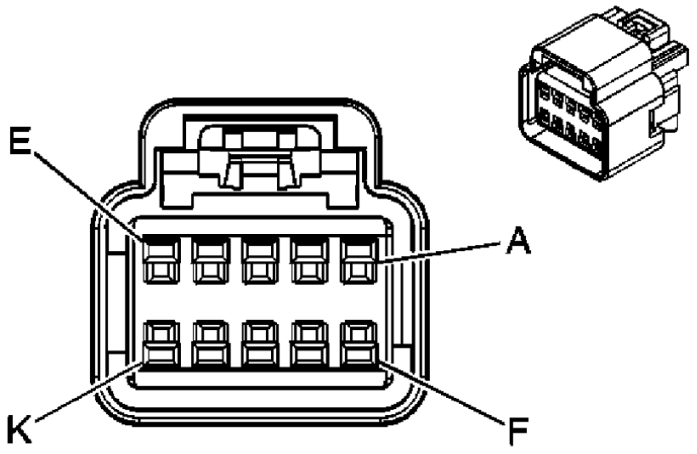
Body Control Module (BCM) X7 (except MEX or A52) (cont'd)

Pin	Wire Color	Circuit No.	Function
26	0.35 PU	171	Power Window Master Switch Right Rear Down Signal (AN3 or DL3 with Crew Cab and with A31 or HP2, or Extended Cab with ABV)
27	0.35 L-BU/WH	280	Power Window Master Switch Lockout Right Rear Signal (AN3 or DL3 with Crew Cab and with A31 or HP2, or Extended Cab with ABV)
28	0.35 D-GN	168	Power Window Master Switch Left Rear Up Signal (AN3 or DL3 with Crew Cab and with A31 or HP2, or Extended Cab with ABV)
28	0.35 D-GN	168	Power Window Master Switch Left Rear Up Signal (AN3 or DL3 with Crew Cab and with A31 or HP2, or Extended Cab with ABV)

X500 Left Front Door Harness to Body Harness (YE9 or HP2, without AN3 or DL3)



Connector Part Information
Harness Type: Left Front Door
OEM Connector: 15332153
Service Connector: 19153744
Description: 10-Way F GT 150 Series (BK)

Terminal Part Information
Terminal/Tray: 12191812/19
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pin	Wire Color	Circuit No.	Function
A	0.5 PU/WH	889	Passenger Mirror Motor Down Control (DL8 or DPN)
B	0.5 TN/WH	330	Passenger Mirror Motor Supply Voltage (DL8 or DPN)
C	0.5 OG/WH	881	Passenger Mirror Motor Right Control (DL8 or DPN)
D	0.5 WH	2132	Side Impact Sensing Module - Signal (ASF)

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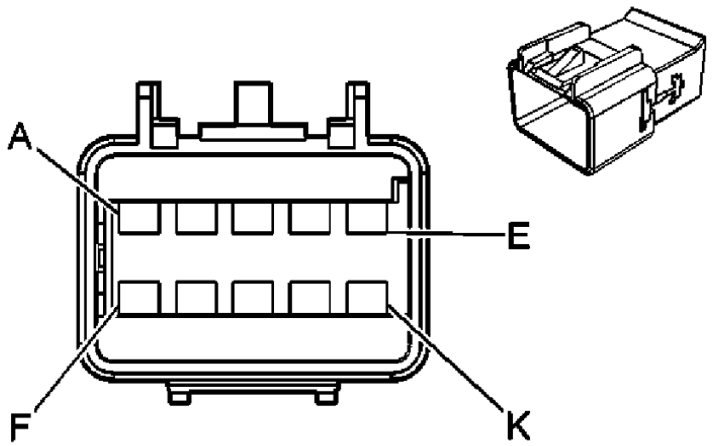

Connector Part Information
Harness Type: Body
OEM Connector: 15332158
Service Connector: 19153745
Description: 10-Way M GT 150 Series (BK)

Terminal Part Information
Terminal/Tray: 15304702/19
Core/Insulation Crimp: A-E, K E/4
Core/Insulation Crimp: F, G, H, J E/C
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pin	Wire Color	Circuit No.	Function
A	0.5 PU/WH	889	Passenger Mirror Motor Down Control (DL8 or DPN)
B	0.5 TN/WH	330	Passenger Mirror Motor Supply Voltage (DL8 or DPN)
C	0.5 OG/WH	881	Passenger Mirror Motor Right Control (DL8 or DPN)
D	0.5 WH	2132	Side Impact Sensing Module - Signal (ASF)

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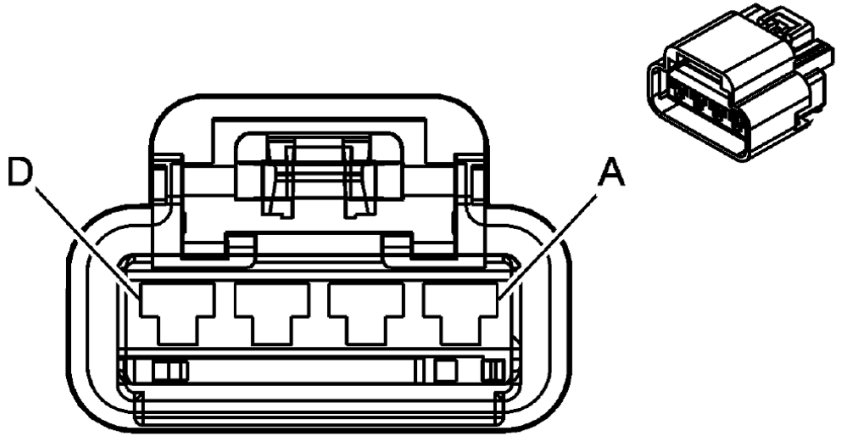
X500 Left Front Door Harness to Body Harness (YE9 or HP2, without AN3 or DL3)

Pin	Wire Color	Circuit No.	Function
E	0.5 PU/WH	6628	Low Reference (ASF)
F	0.35 PU	171	Power Window Master Switch Right Rear Down Signal (A31 or HP2)
G	0.35 L-GN	170	Power Window Master Switch Right Rear Up Signal (A31 or HP2)
H	0.35 YE	43	Accessory Voltage (A31)
J	0.35 TN	167	Power Window Master Switch Right Front Down Signal (A31 or HP2)
K	0.5 OG	2267	Mirror Heating Element Supply Voltage (DL8 or DPN)
J	0.35 TN	167	Power Window Master Switch Right Front Down Signal (A31 or HP2)
K	0.5 OG	2267	Mirror Heating Element Supply Voltage (DL8 or DPN)

Pin	Wire Color	Circuit No.	Function
E	0.5 PU/WH	6628	Low Reference (ASF)
F	0.35 PU	171	Power Window Master Switch Right Rear Down Signal (Crew Cab with A31, HP2 or Extended Cab with ABV)
G	0.35 L-GN	170	Power Window Master Switch Right Rear Up Signal (Crew Cab with A31, HP2 or Extended Cab with ABV)
H	0.35 YE	43	Accessory Voltage
J	0.35 TN	167	Power Window Master Switch Right Front Down Signal (A31 or HP2)
K	0.5 OG	2267	Mirror Heating Element Supply Voltage (DL8 or DPN)

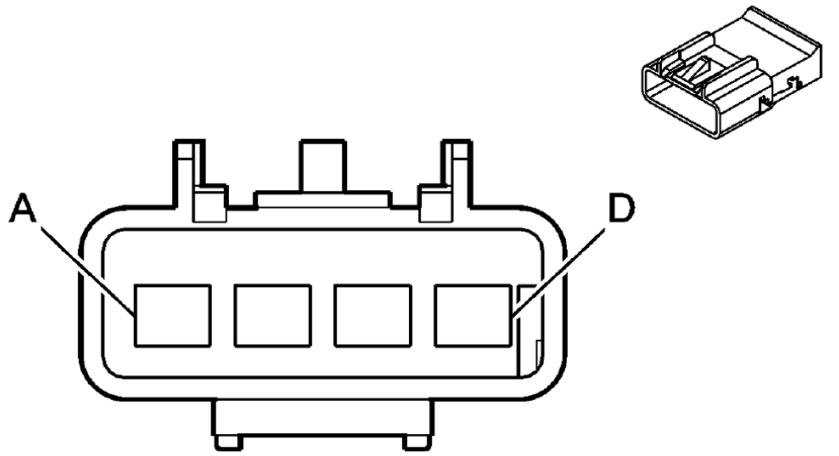
X502 Left Front Door Harness to Body Harness (ASF with AN3 or DL3, and except YE9)



Connector Part Information
Harness Type: Left Front Door
OEM Connector: 15326886
Service Connector: 19177542
Description: 4-Way F GT 280 Series (BK)

Terminal Part Information
Terminal/Tray: 15304711/8
Core/Insulation Crimp: E/A
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pin	Wire Color	Circuit No.	Function
A	0.5 PU/WH	6628	Low Reference
B	0.5 WH	2132	Left Front Side Impact Sensing Module Signal
C-D	--	--	Not Used

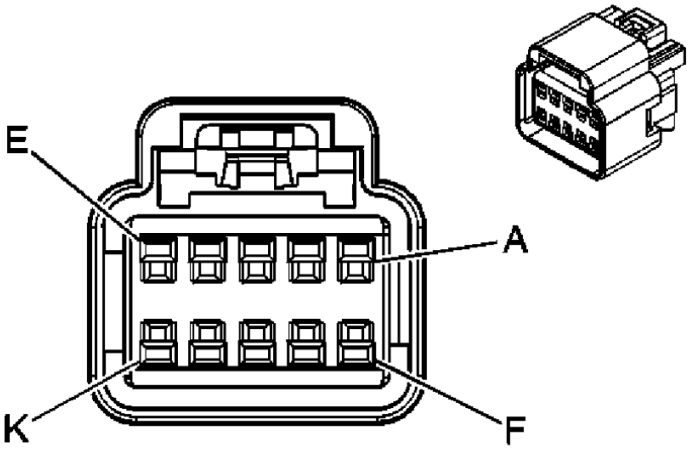


Connector Part Information
Harness: Body
OEM: 15326890
Service: 88953361
Description: 4-Way M GT 280 Series (BK)

Terminal Part Information
Terminal/Tray: 15304722/8
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-5 (PU)

Pin	Wire Color	Circuit No.	Function
A	0.5 PU/WH	6628	Low Reference
B	0.5 WH	2132	Left Front Side Impact Sensing Module Signal
C-D	--	--	Not Used

X501 Left Front Door Harness to Body Harness (YE9 or HP2, without AN3 or DL3)



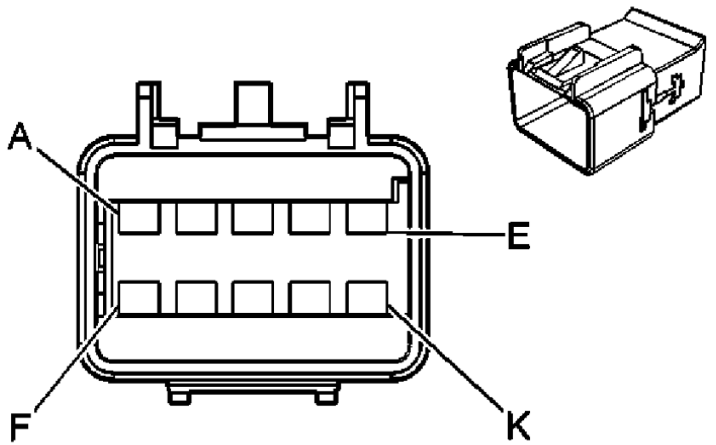
Connector Part Information
Harness Type: Left Front Door
OEM Connector: 15332153
Service Connector: 19153744
Description: 10-Way F GT 150 Series (BK)

Terminal Part Information
Pins: F, G
Terminal/Tray: 12191812/19
Core/Insulation Crimp: C/A
Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pins: A, B, C, D, E, H, J, K
Terminal/Tray: 12191812/19
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pin	Wire Color	Circuit No.	Function
A	0.35 L-BU	166	Power Window Master Switch Right Front Up Signal (A31 or HP2)

(continued on next page)



Connector Part Information
Harness: Body
OEM: 15332158
Service: 88953270
Description: 10-Way M GT 150 (BK)

Terminal Part Information
Pins: F, G
Terminal/Tray: 15304702/19
Core/Insulation Crimp: 2/4
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pins: A, B, C, D, E, H, J, K
Terminal/Tray: 15304702/19
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pin	Wire Color	Circuit No.	Function
A	0.35 L-BU	166	Power Window Master Switch Right Front Up Signal (A31 or HP2)

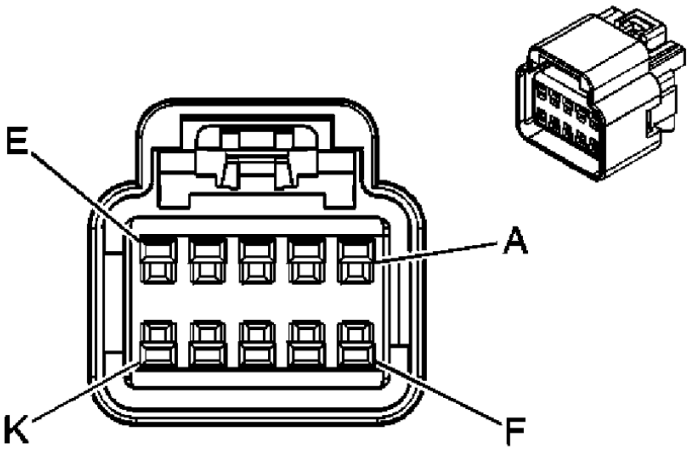
(continued on next page)

X501 Left Front Door Harness to Body Harness (YE9 or HP2, without AN3 or DL3) (cont'd)

Pin	Wire Color	Circuit No.	Function
B	0.35 PU	169	Power Window Master Switch Left Rear Down Signal (Crew Cab with A31, HP2 or Extended Cab with ABV)
C	0.35 D-GN	168	Power Window Master Switch Left Rear Up Signal (Crew Cab with A31, HP2 or Extended Cab with ABV)
D	0.35 D-BU	1307	Power Window Master Switch Lockout Signal (Crew Cab with A31, HP2 or Extended Cab with ABV)
E	0.35 L-BU/WH	280	Power Window Master Switch Lockout Right Rear Signal (Crew Cab with A31, HP2 or Extended Cab with ABV)
F	0.8 GY	295	Door Lock Actuator Lock Control (AU3 or HP2)
G	0.8 TN	694	Driver Door Lock Actuator Unlock Control (AU3 or HP2)
H	0.35 OG/BK	781	Driver Door Lock Switch Unlock Signal (AU3 or HP2)
J	0.35 PK/BK	780	Driver Door Lock Switch Lock Signal (AU3)
K	0.35 L-GN	262	Driver Door Key Switch Signal (AU3)

Pin	Wire Color	Circuit No.	Function
B	0.35 PU	169	Power Window Master Switch Left Rear Down Signal (Crew Cab with A31, HP2 or Extended Cab with ABV)
C	0.35 D-GN	168	Power Window Master Switch Left Rear Up Signal (Crew Cab with A31, HP2 or Extended Cab with ABV)
D	0.35 D-BU	1307	Power Window Master Switch Lockout Signal (Crew Cab with A31, HP2 or Extended Cab with ABV)
E	0.35 L-BU/WH	280	Power Window Master Switch Lockout Right Rear Signal (Crew Cab with A31, HP2 or Extended Cab with ABV)
F	0.8 GY	295	Door Lock Actuator Lock Control (AU3 or HP2)
G	0.8 TN	694	Driver Door Lock Actuator Unlock Control (AU3 or HP2)
H	0.35 OG/BK	781	Driver Door Lock Switch Unlock Signal (AU3 or HP2)
J	0.35 PK/BK	780	Driver Door Lock Switch Lock Signal
K	0.35 L-GN	262	Driver Door Key Switch Signal

X600 Right Front Door Harness to Body Harness (YE9 or HP2, without AN3 or DL3)



Connector Part Information
Harness Type: Right Front Door
OEM Connector: 15332153
Service Connector: 19153744
Description: 10-Way F GT 150 Series (BK)

Terminal Part Information
Pins: A, C-K
Terminal/Tray: 12191812/19
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pin	Wire Color	Circuit No.	Function
A	0.5 OG	2267	Mirror Heating Element Supply Voltage (DL8 or DPN)
B	--	--	Not Used
C	0.35 YE	43	Accessory Voltage (A31 or HP2)
D	0.5 PU/WH	889	Passenger Mirror Motor Down Control (DL8 or DPN)
E	0.5 TN/WH	330	Passenger Mirror Motor Supply Voltage (DL8 or DPN)

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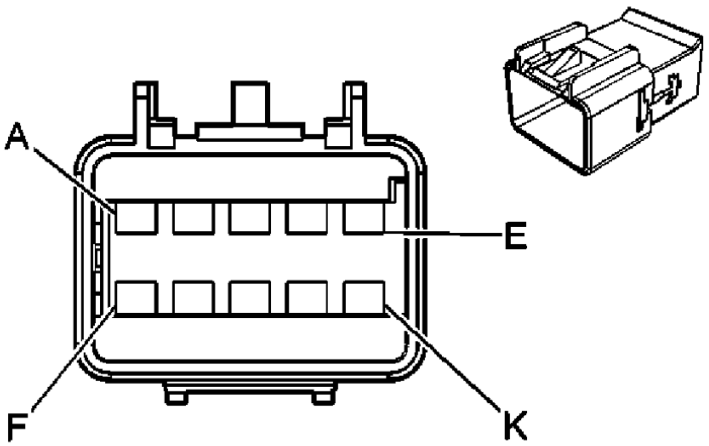

Connector Part Information
Harness Type: Body
OEM Connector: 15332158
Service Connector: 19153745
Description: 10-Way M GT 150 Series (BK)

Terminal Part Information
Pins: A, D-F
Terminal/Tray: 15304702/19
Core/Insulation Crimp: E/4
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pins: C, G-K
Terminal/Tray: 15304702/19
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pin	Wire Color	Circuit No.	Function
A	0.5 OG	2267	Mirror Heating Element Supply Voltage (DL8 or DPN)
B	--	--	Not Used
C	0.35 YE	43	Accessory Voltage (A31 or HP2)

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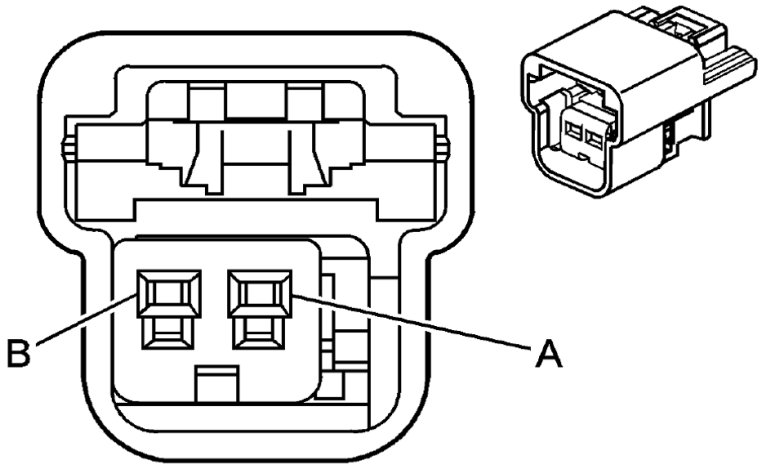
X600 Right Front Door Harness to Body Harness (YE9 or HP2, without AN3 or DL3) (cont'd)

Pin	Wire Color	Circuit No.	Function
F	0.5 OG/WH	881	Passenger Mirror Motor Right Control (DL8 or DPN)
G	0.35 TN	167	Power Window Master Switch Right Front Down Signal (A31 or HP2)
H	0.35 L-BU	166	Power Window Master Switch Right Front Up Signal (A31 or HP2)
J	0.35 L-BU	244	Passenger Door Lock Switch Lock Signal (A31 or HP2)
K	0.35 D-BU	245	Passenger Door Lock Switch Unlock Signal (A31 or HP2)

Pin	Wire Color	Circuit No.	Function
D	0.5 PU/WH	889	Passenger Mirror Motor Down Control (DL8 or DPN)
E	0.5 TN/WH	330	Passenger Mirror Motor Supply Voltage (DL8 or DPN)
F	0.5 OG/WH	881	Passenger Mirror Motor Right Control (DL8 or DPN)
G	0.35 TN	167	Power Window Master Switch Right Front Down Signal (A31 or HP2)
H	0.35 L-BU	166	Power Window Master Switch Right Front Up Signal (A31 or HP2)
J	0.35 L-BU	244	Passenger Door Lock Switch Lock Signal (A31 or HP2)
K	0.35 D-BU	245	Passenger Door Lock Switch Unlock Signal (A31 or HP2)

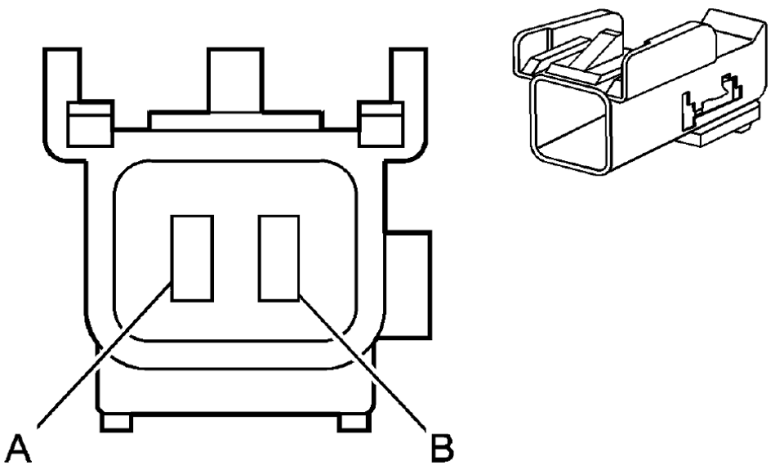
X601 Right Front Door Harness to Body Harness (ASF)



Connector Part Information
Harness: Right Front Door
OEM: 15332129
Service: 15306425
Description: 2-Way F GT 150 (BK)

Terminal Part Information
Terminal/Tray: 12191812/19
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pin	Wire Color	Circuit No.	Function
A	0.5 WH/WH	6629	Low Reference
B	0.5 D-GN	2134	Right Front Side Impact Sensing Module Signal

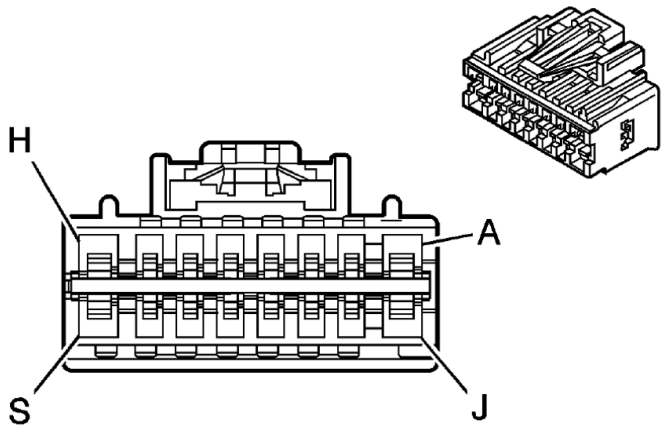


Connector Part Information
Harness: Body
OEM: 15332130
Service: 88986459
Description: 2-Way M GT 150 (BK)

Terminal Part Information
Terminal/Tray: 15304702/19
Core/Insulation Crimp: E/4
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pin	Wire Color	Circuit No.	Function
A	0.5 WH/BK	6629	Low Reference
B	0.5 D-GN	2134	Right Front Side Impact Sensing Module Signal

X700 Body Harness to Left Rear Door Harness (Crew Cab)



Connector Part Information
Harness: Body
OEM: 13539998
Service:19180283
Description: 16-Way F GT 150, 280 Series (BK)

Terminal Part Information
Pins: A, H
Terminal/Tray: 15304713/19
Core/Insulation Crimp: F/D
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: B-G, M, R
Terminal/Tray: 12191812/19
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pins: K-P
Terminal/Tray: 12191812/19
Core/Insulation Crimp: C/A
Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pin	Wire Color	Circuit No.	Function
A	3 BK	1150	Ground

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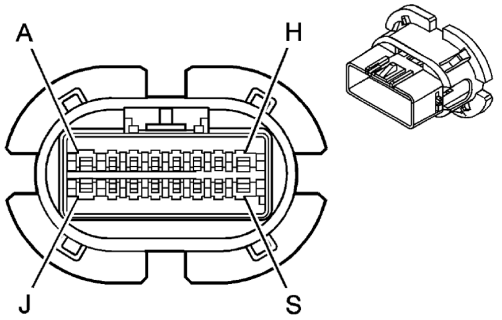

Connector Part Information
Harness: Left Rear Door
OEM: 13579161
Service: Service by Harness - See Part Catalog
Description: 16-Way M GT 150 280 Series (GY)

Terminal Part Information
Pins: A, H
Terminal/Tray: 15304724/8
Core/Insulation Crimp: A/D
Release Tool/Test Probe: 15315247/J-35616-5 (PU)

Pins: B-F, M
Terminal/Tray: 15304702/19
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pins: G, R
Terminal/Tray: 15304702/19
Core/Insulation Crimp: E/4
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pins: K, L (UQA)
Pins: N-P
Terminal/Tray: 15304702/19
Core/Insulation Crimp: 2/4
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pins: K, L (UQ3 or UQ5)
Terminal/Tray: 15304702/19
Core/Insulation Crimp: E/4
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

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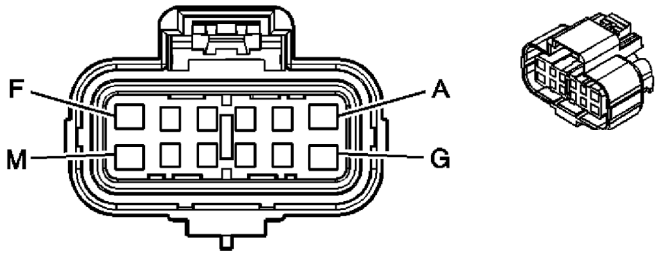
X700 Body Harness to Left Rear Door Harness (Crew Cab) (cont'd)

Pin	Wire Color	Circuit No.	Function
B	0.35 PU	169	Power Window Master Switch Left Rear Down Signal
C	0.35 D-BU	1307	Power Window Master Switch Lockout Signal
D	0.35 D-GN	168	Power Window Master Switch Left Rear Up Signal
E	0.5 BN/WH	230	Instrument Panel Lamps Dimming Control (A31)
F	0.35 L-BU/BK	747	Left Rear Door Ajar Switch Signal
G	0.5 L-GN/BK	6623	Low Reference (ASF)
H	3 RD/WH	1240	Battery Positive Voltage
J	--	--	Not Used
K	0.8 YE	116	Left Rear Speaker Output (-)
L	0.8 BN	199	Left Rear Speaker Output (+)
M	0.5 BK	1150	Ground
N	0.8 TN	294	Door Lock Actuator Unlock Control
P	0.8 GY	295	Door Lock Actuator Lock Control
R	0.5 L-BU	6622	Left Rear Side Impact Sensing Module Signal (ASF)
S	--	--	Not Used

Pin	Wire Color	Circuit No.	Function
A	3 BK	1150	Ground
B	0.35 PU	169	Power Window Master Switch Left Rear Down Signal
C	0.35 D-BU	1307	Power Window Master Switch Lockout Signal
D	0.35 D-GN	168	Power Window Master Switch Left Rear Up Signal
E	0.5 BN/WH	230	Instrument Panel Lamps Dimming Control (A31 with UQA)
F	0.35 L-BU/BK	747	Left Rear Door Ajar Switch Signal
G	0.5 L-GN/BK	6623	Low Reference (ASF)
H	3 RD/WH	1240	Battery Positive Voltage
J	--	--	Not Used
K	0.8 YE	116	Left Rear Speaker Output (-) (UQA)
	0.5 YE	116	Left Rear Speaker Output (-) (UQ3 or UQ5)
L	0.8 BN	199	Left Rear Speaker Output (+) (UQA)
	0.5 BN	199	Left Rear Speaker Output (+) (UQ3 or UQ5)
M	0.35 BK	1150	Ground
N	0.8 TN	294	Door Lock Actuator Unlock Control
P	0.8 GY	295	Door Lock Actuator Lock Control
R	0.5 L-BU	6622	Left Rear Side Impact Sensing Module Signal (ASF)
S	--	--	Not Used

X700 Left Rear Door Harness to Body Harness (Extended Cab)



Connector Part Information
Harness: Left Rear Door
OEM: 15336205
Service: 88986267
Description: 12-Way F GT Mixed (BK)

Terminal Part Information
Pins: A, F
Terminal/Tray: 15304713/19
Core/Insulation Crimp: F/D
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: B-E, H
Terminal/Tray: 12191812/19
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pins: G
Terminal/Tray: 15304711/8
Core/Insulation Crimp: E/A
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: K, L (UQA)
Terminal/Tray: 12191812/19
Core/Insulation Crimp: C/A
Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pins: K, L (UQ3 or UQ5)
Terminal/Tray: 12191812/19
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-2A (GY)

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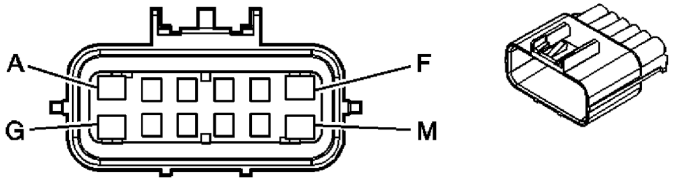

Connector Part Information
Harness: Body
OEM: 15336209
Service: 88986259
Description: 12-Way M GT Mixed (BK)

Terminal Part Information
Pins: A, F
Terminal/Tray: 15304724/8
Core/Insulation Crimp: C/D
Release Tool/Test Probe: 15315247/J-35616-5 (PU)

Pins: B-E
Terminal/Tray: 15304702/19
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pins: F-H
Terminal/Tray: 15304702/19
Core/Insulation Crimp: E/4
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pins: G
Terminal/Tray: 15304722/8
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-5 (PU)

Pins: K, L
Terminal/Tray: 15304702/19
Core/Insulation Crimp: 2/4
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

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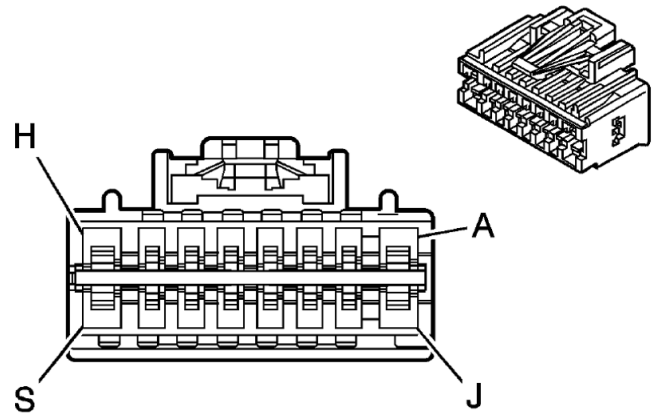
X700 Left Rear Door Harness to Body Harness (Extended Cab) (cont'd)

Pin	Wire Color	Circuit No.	Function
A	3 BK	1150	Ground
B	0.35 PU	169	Power Window Master Switch Left Rear Down Signal
C	0.35 D-BU	1307	Power Window Master Switch Lockout Signal
D	0.35 D-GN	168	Power Window Master Switch Left Rear Up Signal
E	0.5 BN/WH	230	Instrument Panel Lamps Dimming Control (ABV with UQA)
F	3 RD/WH	1240	Battery Positive Voltage
G	0.5 L-GN/BK	6623	Low Reference (ASF)
H	0.5 L-BU	6622	Left Rear Side Impact Sensing Module Signal (ASF)
J	--	--	Not Used
K	0.8 BN	199	Left Rear Speaker Output (+) (UQA)
	0.5 BN	199	Left Rear Speaker Output (+) (UQ3 or UQ5)
L	0.8 YE	116	Left Rear Speaker Output (-) (UQA)
	0.5 YE	116	Left Rear Speaker Output (-) (UQ3 or UQ5)
M	--	--	Not Used

Pin	Wire Color	Circuit No.	Function
A	3 BK	1150	Ground
B	0.35 PU	169	Power Window Master Switch Left Rear Down Signal
C	0.35 D-BU	1307	Power Window Master Switch Lockout Signal
D	0.35 D-GN	168	Power Window Master Switch Left Rear Up Signal
E	0.5 BN/WH	230	Instrument Panel Lamps Dimming Control (ABV)
F	2 RD/WH	1240	Battery Positive Voltage
G	0.5 L-GN/BK	6623	Low Reference (ASF)
H	0.5 L-BU	6622	Left Rear Side Impact Sensing Module Signal (ASF)
J	--	--	Not Used
K	0.8 BN	199	Left Rear Speaker Output (+)
L	0.8 YE	116	Left Rear Speaker Output (-)
M	--	--	Not Used

X800 Body Harness to Right Rear Door Harness (Crew Cab)



Connector Part Information
Harness: Body
OEM: 13539998
Service: 19180283
Description: 16-Way F GT 150, 280 Series (BK)

Terminal Part Information
Pins: A, H
Terminal/Tray: 15304713/19
Core/Insulation Crimp: F/D
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: B-G, M, R
Terminal/Tray: 12191812/19
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pins: K-P
Terminal/Tray: 12191812/19
Core/Insulation Crimp: C/A
Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pin	Wire Color	Circuit No.	Function
A	3 BK	1250	Ground

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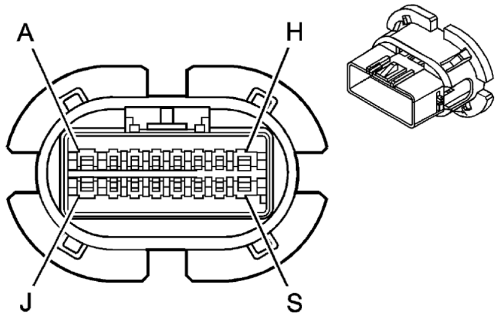

Connector Part Information
Harness: Right Rear Door
OEM: 13579161
Service: Service by Harness - See Part Catalog
Description: 16-Way M GT 150 280 Series (GY)

Terminal Part Information
Pins: A, H
Terminal/Tray: 15304724/8
Core/Insulation Crimp: A/D
Release Tool/Test Probe: 15315247/J-35616-5 (PU)

Pins: B-E, M
Terminal/Tray: 15304702/19
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pins: G, R
Terminal/Tray: 15304702/19
Core/Insulation Crimp: E/4
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pins: K, L (UQA)
Pins: N-P
Terminal/Tray: 15304702/19
Core/Insulation Crimp: 2/4
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pins: K, L (UQ3 or UQ5)
Terminal/Tray: 15304702/19
Core/Insulation Crimp: E/4
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

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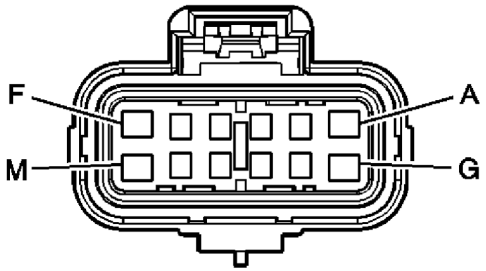
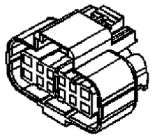
X800 Body Harness to Right Rear Door Harness (Crew Cab) (cont'd)

Pin	Wire Color	Circuit No.	Function
B	0.35 PU	171	Power Window Master Switch Right Rear Down Signal
C	0.35 L-BU/WH	280	Power Window Master Switch Lockout Right Rear Signal
D	0.35 L-GN	170	Power Window Master Switch Right Rear Up Signal
E	0.5 BN/WH	230	Instrument Panel Lamps Dimming Control (A31)
F	0.35 L-GN/BK	748	Right Rear Door Ajar Switch Signal
G	0.5 PK/BK	6627	Low Reference (ASF)
H	3 RD/WH	1340	Battery Positive Voltage
J	--	--	Not Used
K	0.8 L-BU	115	Right Rear Speaker Output (-)
L	0.8 D-BU	46	Right Rear Speaker Output (+)
M	0.5 BK	1250	Ground
N	0.8 TN	294	Door Lock Actuator Unlock Control
P	0.8 GY	295	Door Lock Actuator Lock Control
R	0.5 L-BU/WH	6626	Right Rear Side Impact Sensing Module Signal (ASF)
S	--	--	Not Used

Pin	Wire Color	Circuit No.	Function
A	3 BK	1250	Ground
B	0.35 PU	171	Power Window Master Switch Right Rear Down Signal
C	0.35 L-BU/WH	280	Power Window Master Switch Lockout Right Rear Signal
D	0.35 L-GN	170	Power Window Master Switch Right Rear Up Signal
E	0.5 BN/WH	230	Instrument Panel Lamps Dimming Control (A31 with UQA)
F	0.35 L-GN/BK	748	Right Rear Door Ajar Switch Signal
G	0.5 PK/BK	6627	Low Reference (ASF)
H	3 RD/WH	1340	Battery Positive Voltage
J	--	--	Not Used
K	0.8 L-BU	115	Right Rear Speaker Output (-) (UQA)
	0.5 L-BU	115	Right Rear Speaker Output (-) (UQ3 or UQ5)
L	0.8 D-BU	46	Right Rear Speaker Output (+) (UQA)
	0.5 D-BU	46	Right Rear Speaker Output (+) (UQ3 or UQ5)
M	0.35 BK	1250	Ground
N	0.8 TN	294	Door Lock Actuator Unlock Control
P	0.8 GY	295	Door Lock Actuator Lock Control
R	0.5 L-BU/WH	6626	Right Rear Side Impact Sensing Module Signal (ASF)
S	--	--	Not Used

X800 Right Rear Door Harness to Body Harness (Extended Cab)





Connector Part Information
Harness: Right Rear Door
OEM: 15336205
Service: 88986267
Description: 12-Way F GT Mixed (BK)

Terminal Part Information
Pins: A, F
Terminal/Tray: 15304713/19
Core/Insulation Crimp: F/D
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

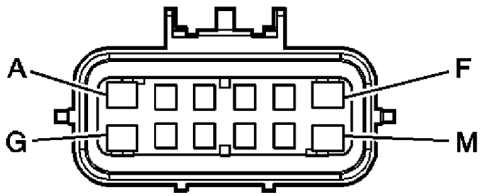
Pins: B-E, H
Terminal/Tray: 12191812/19
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-2A (GY)

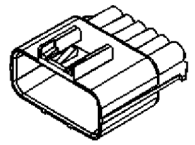
Pins: G
Terminal/Tray: 15304711/8
Core/Insulation Crimp: E/A
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: K, L (UQA)
Terminal/Tray: 12191812/19
Core/Insulation Crimp: C/A
Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pins: K, L (UQ3 or UQ5)
Terminal/Tray: 12191812/19
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-2A (GY)

(continued on next page)





Connector Part Information
Harness: Body
OEM: 15336209
Service: 88986259
Description: 12-Way M GT Mixed (BK)

Terminal Part Information
Pins: A, F
Terminal/Tray: 15304724/8
Core/Insulation Crimp: C/D
Release Tool/Test Probe: 15315247/J-35616-5 (PU)

Pins: B-E
Terminal/Tray: 15304702/19
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pins: F-H
Terminal/Tray: 15304702/19
Core/Insulation Crimp: E/4
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pins: G
Terminal/Tray: 15304722/8
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-5 (PU)

Pins: K, L
Terminal/Tray: 15304702/19
Core/Insulation Crimp: 2/4
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

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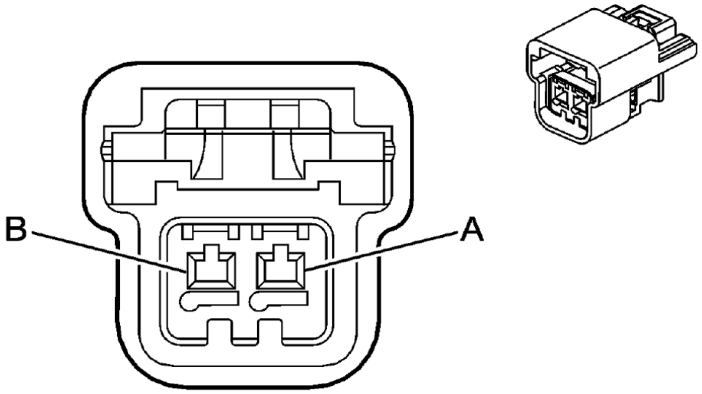
X800 Right Rear Door Harness to Body Harness (Extended Cab) (cont'd)

Pin	Wire Color	Circuit No.	Function
A	3 BK	1250	Ground
B	0.35 PU	171	Power Window Master Switch Right Rear Down Signal
C	0.35 L-BU/WH	280	Power Window Master Switch Lockout Right Rear Signal
D	0.35 L-GN	170	Power Window Master Switch Right Rear Up Signal
E	0.5 BN/WH	230	Instrument Panel Lamps Dimming Control (ABV with UQA)
F	3 RD/WH	1340	Battery Positive Voltage
G	0.5 PK/BK	6627	Low Reference (ASF)
H	0.5 L-BU/WH	6626	Right Rear Side Impact Sensing Module Signal (ASF)
J	--	--	Not Used
K	0.8 D-BU	46	Right Rear Speaker Output (+) (UQA)
	0.5 D-BU	46	Right Rear Speaker Output (+) (UQ3 or UQ5)
L	0.8 L-BU	115	Right Rear Speaker Output (-) (UQA)
	0.5 L-BU	115	Right Rear Speaker Output (-) (UQ3 or UQ5)
M	--	--	Not Used

Pin	Wire Color	Circuit No.	Function
A	3 BK	1250	Ground
B	0.35 PU	171	Power Window Master Switch Right Rear Down Signal
C	0.35 L-BU/WH	280	Power Window Master Switch Lockout Right Rear Signal
D	0.35 L-GN	170	Power Window Master Switch Right Rear Up Signal
E	0.5 BN/WH	230	Instrument Panel Lamps Dimming Control (ABV)
F	2 RD/WH	1340	Battery Positive Voltage
G	0.5 PK/BK	6627	Low Reference (ASF)
H	0.5 L-BU/WH	6626	Right Rear Side Impact Sensing Module Signal (ASF)
J	--	--	Not Used
K	0.8 D-BU	46	Right Rear Speaker Output (+)
L	0.8 L-BU	115	Right Rear Speaker Output (-)
M	--	--	Not Used

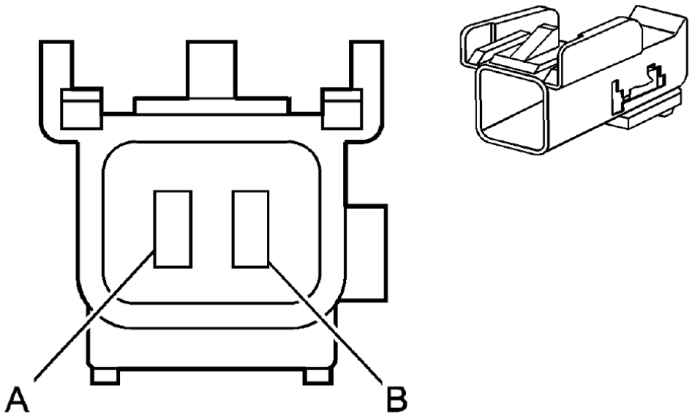
X500 Driver Door Harness to Body Harness (ASF)



Connector Part Information
Harness Type: Driver Door
OEM Connector: 13668003
Service Connector: 13577919
Description: 2-Way F GT 150 Series (BK)

Terminal Part Information
Terminated Lead: 13575492
Release Tool: J-38125-29
Diagnostic Test Probe: J-35616-2A (GY)
Terminal/Tray: 13673609/Not Available
Core/Insulation Crimp: Not Available

Pin	Wire Color	Circuit No.	Function
A	0.5 PU/WH	6628	Low Reference
B	0.5 WH	2132	Side Impact Sensing Module - Left - Signal

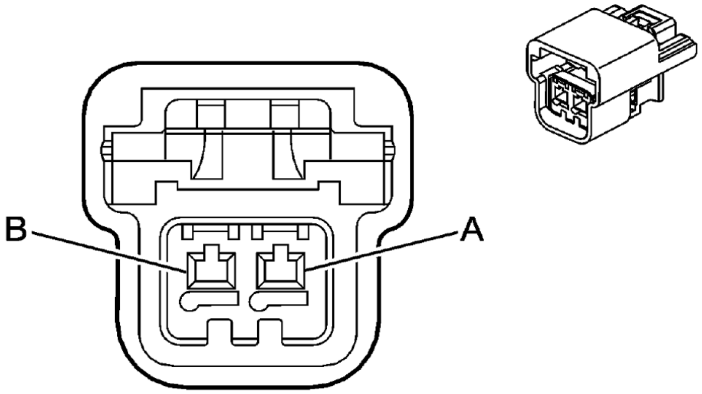


Connector Part Information
Harness Type: Body
OEM Connector: 15332130
Service Connector: 88986459
Description: 2-Way M GT 150 Series (BK)

Terminal Part Information
Terminated Lead: 13575502
Release Tool: J-38125-553
Diagnostic Test Probe: J-35616-3 (GY)
Terminal/Tray: 15304702/19
Core/Insulation Crimp: E/4

Pin	Wire Color	Circuit No.	Function
A	0.5 PU/WH	6628	Low Reference
B	0.5 WH	2132	Side Impact Sensing Module - Left - Signal

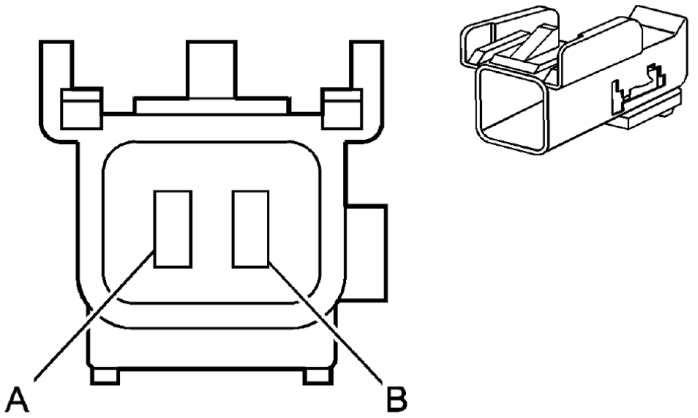
X600 Passenger Door Harness to Body Harness (ASF)



Connector Part Information
Harness Type: Passenger Door
OEM Connector: 13668003
Service Connector: 13577919
Description: 2-Way F GT 150 Series (BK)

Terminal Part Information
Terminated Lead: 13575492
Release Tool: J-38125-29
Diagnostic Test Probe: J-35616-2A (GY)
Terminal/Tray: 13673609/Not Available
Core/Insulation Crimp: Not Available

Pin	Wire Color	Circuit No.	Function
A	0.5 WH/BK	6629	Low Reference
B	0.5 D-GN	2134	Side Impact Sensing Module - Right - Signal

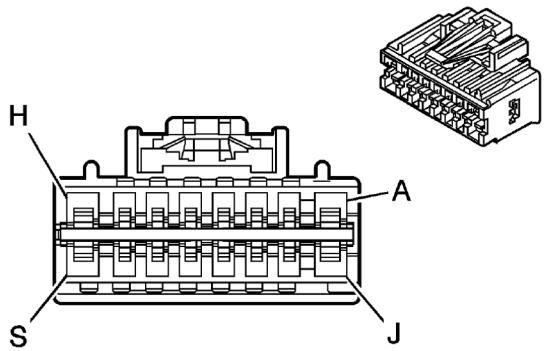


Connector Part Information
Harness Type: Body
OEM Connector: 15332130
Service Connector: 88986459
Description: 2-Way M GT 150 Series (BK)

Terminal Part Information
Terminated Lead: 13575502
Release Tool: J-38125-553
Diagnostic Test Probe: J-35616-3 (GY)
Terminal/Tray: 15304702/19
Core/Insulation Crimp: E/4

Pin	Wire Color	Circuit No.	Function
A	0.5 WH/BK	6629	Low Reference
B	0.5 D-GN	2134	Side Impact Sensing Module - Right - Signal

X700 Body Harness to Left Rear Door Harness



Connector Part Information
Harness Type: Body
OEM Connector: 13539998
Service Connector: 19180283
Description: 16-Way F GT 150 280 Series (BK)

Terminal Part Information
Pins: A, H
Terminated Lead: 13575756
Release Tool: J-35125-553
Diagnostic Test Probel: J-35616-4A (PU)
Terminal/Tray: 15304713/19
Core/Insulation Crimp: F/D

Pins: B-G, K-R
Terminated Lead: 13575735
Release Tool: J-35125-553
Diagnostic Test Probel: J-35616-2A (GY)
Terminal/Tray: 12191812/19
Core/Insulation Crimp: Pins: B-G, M, R: E/C
Core/Insulation Crimp: Pins: K, L, N, P: C/A

Pin	Wire Color	Circuit No.	Function
A	3 BK	1150	Ground
B	0.35 PU	169	Power Window Master Switch Left Rear Down Signal

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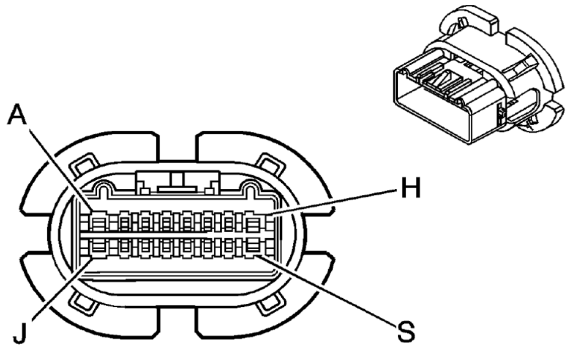

Connector Part Information
Harness Type: Left Rear Door
OEM Connector: 13540002
Service Connector: 19115742
Description: 16-Way M GT 150 280 Series (WH)

Terminal Part Information
Pins: A, H
Terminated Lead: 13575510
Release Tool: J-35125-553
Diagnostic Test Probel: J-35616-5 (PU)
Terminal/Tray: 15304724/8
Core/Insulation Crimp: A/D

Pins: B-G, K-R
Terminated Lead: 13575502
Release Tool: J-35125-553
Terminal/Tray: 15304702/19
Core/Insulation Crimp: Pins: B-D, F, M - E/D
Core/Insulation Crimp: Pins: E, G, K (UQ3), L (UQ3), R - E/4
Core/Insulation Crimp: Pins: K (UQA or UQS), L (UQA or UQS), N, P - 2/4

Pin	Wire Color	Circuit No.	Function
A	3 BK	1150	Ground
B	0.35 PU	169	Power Window Master Switch Left Rear Down Signal

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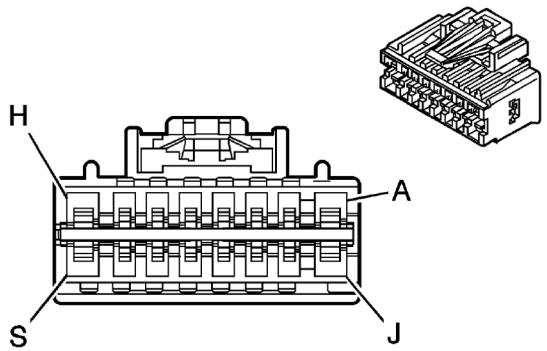
X700 Body Harness to Left Rear Door Harness (cont'd)

Pin	Wire Color	Circuit No.	Function
C	0.35 D-BU	1307	Power Window Master Switch Lockout Signal
D	0.35 D-GN	168	Power Window Master Switch Left Rear Up Signal
E	0.35 BN/WH	230	Instrument Panel Lamp Dimming Control
F	0.35 L-BU/BK	747	Left Rear Door Ajar Switch Signal
G	0.5 GY/BK	6621	Low Reference (ASF)
H	3 RD/WH	1240	Battery Positive Voltage
J	--	--	Not Used
K	0.8 YE	116	Left Rear Speaker Output (-)
L	0.8 BN	199	Left Rear Speaker Output (+)
M	0.5 BK	1150	Ground
	0.35 BK	1150	Ground (5W4 or PPV)
N	0.8 TN	294	Door Lock Actuator Unlock Control
P	0.8 GY	295	Door Lock Actuator Lock Control
R	0.5 D-GN/WH	6620	Left Rear Side Impact Sensing Module Signal (ASF)
S	--	--	Not Used

Pin	Wire Color	Circuit No.	Function
C	0.35 D-BU	1307	Power Window Master Switch Lockout Signal
D	0.35 D-GN	168	Power Window Master Switch Left Rear Up Signal
E	0.5 BN/WH	230	Instrument Panel Lamp Dimming Control
F	0.35 L-BU/BK	747	Left Rear Door Ajar Switch Signal
G	0.5 GY/BK	6621	Low Reference (ASF)
H	3 RD/WH	1240	Battery Positive Voltage
J	--	--	Not Used
K	0.5 YE	116	Left Rear Speaker Output (-) (UQ3)
	0.8 YE	116	Left Rear Speaker Output (-) (UQA/UQS)
L	0.5 BN	199	Left Rear Speaker Output (+) (UQ3)
	0.8 BN	199	Left Rear Speaker Output (+) (UQA/UQS)
M	0.35 BK	1150	Ground
N	0.8 TN	294	Door Lock Actuator Unlock Control
P	0.8 GY	295	Door Lock Actuator Lock Control
R	0.5 D-GN/WH	6620	Left Rear Side Impact Sensing Module Signal (ASF)
S	--	--	Not Used

X800 Body Harness to Right Rear Door Harness



Connector Part Information
Harness Type: Body
OEM Connector: 13539998
Service Connector: 19180283
Description: 16-Way F GT 150 280 Series (BK)

Terminal Part Information
Pins: A, H
Terminated Lead: 13575756
Release Tool: J-35125-553
Diagnostic Test Probel: J-35616-4A (PU)
Terminal/Tray: 15304713/19
Core/Insulation Crimp: F/D

Pins: B-G, K-R
Terminated Lead: 13575735
Release Tool: J-35125-553
Diagnostic Test Probel: J-35616-2A (GY)
Terminal/Tray: 12191812/19
Core/Insulation Crimp: Pins: B-G, M, R: E/C
Core/Insulation Crimp: Pins: K, L, N, P: C/A

Pin	Wire Color	Circuit No.	Function
A	3 BK	1250	Ground
B	0.35 PU	171	Power Window Master Switch Right Rear Down Signal

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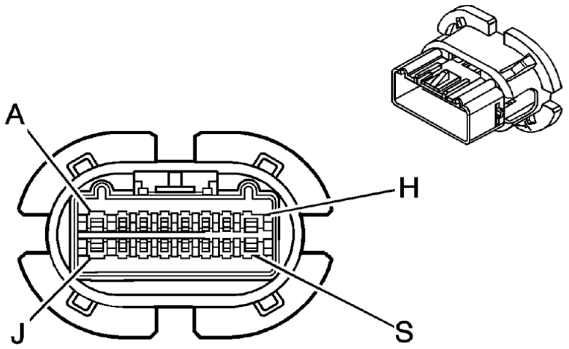

Connector Part Information
Harness Type: Left Rear Door
OEM Connector: 13540002
Service Connector: 19115742
Description: 16-Way M GT 150 280 Series (WH)

Terminal Part Information
Pins: A, H
Terminated Lead: 13575510
Release Tool: J-35125-553
Diagnostic Test Probel: J-35616-5 (PU)
Terminal/Tray: 15304724/8
Core/Insulation Crimp: A/D

Pins: B-G, K-R
Terminated Lead: 13575502
Release Tool: J-35125-553
Terminal/Tray: 15304702/19
Core/Insulation Crimp: Pins: B-D, F, M - E/D
Core/Insulation Crimp: Pins: E, G, K (UQ3), L (UQ3), R - E/4
Core/Insulation Crimp: Pins: K (UQA or UQS), L (UQA or UQS), N, P - 2/4

Pin	Wire Color	Circuit No.	Function
A	3 BK	1250	Ground
B	0.35 PU	171	Power Window Master Switch Right Rear Down Signal

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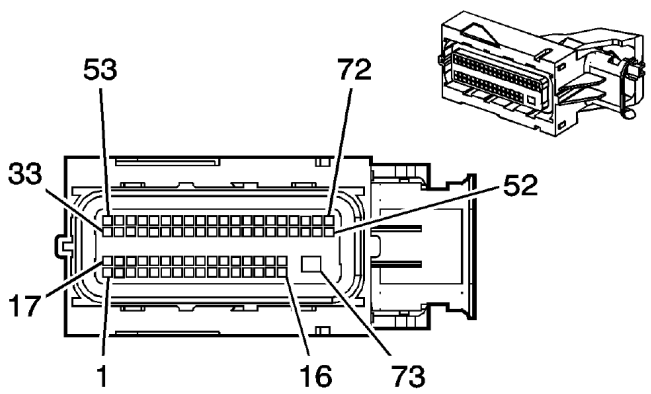
X800 Body Harness to Right Rear Door Harness (cont'd)

Pin	Wire Color	Circuit No.	Function
C	0.35 L-BU/WH	280	Power Window Master Switch Lockout Right Rear Signal
D	0.35 L-GN	170	Power Window Master Switch Right Rear Up Signal
E	0.5 BN/WH	230	Instrument Panel Lamp Dimming Control
F	0.35 L-GN/BK	748	Right Rear Door Ajar Switch Signal
G	0.5 L-GN/WH	6625	Low Reference (ASF)
H	3 RD/WH	1340	Battery Positive Voltage
J	--	--	Not Used
K	0.8 L-BU	115	Right Rear Speaker Output (-)
L	0.8 D-BU	46	Right Rear Speaker Output (+)
M	0.5 BK	1250	Ground
N	0.8 TN	294	Door Lock Actuator Unlock Control
P	0.8 GY	295	Door Lock Actuator Lock Control
R	0.5 L-BU/BK	6624	Right Rear Side Impact Sensing Module Signal (ASF)
S	--	--	Not Used

Pin	Wire Color	Circuit No.	Function
C	0.35 L-BU/WH	280	Power Window Master Switch Lockout Right Rear Signal
D	0.35 L-GN	170	Power Window Master Switch Right Rear Up Signal
E	0.5 BN/WH	230	Instrument Panel Lamp Dimming Control
F	0.35 L-GN/BK	748	Right Rear Door Ajar Switch Signal
G	0.5 L-GN/WH	6625	Low Reference (ASF)
H	3 RD/WH	1340	Battery Positive Voltage
J	--	--	Not Used
K	0.5 L-BU	115	Right Rear Speaker Output (-) (UQ3)
	0.8 L-BU	115	Right Rear Speaker Output (-) (UQA/UQS)
L	0.5 D-BU	46	Right Rear Speaker Output (+) (UQ3)
	0.8 D-BU	46	Right Rear Speaker Output (+) (UQA/UQS)
M	0.35 BK	1250	Ground
N	0.8 TN	294	Door Lock Actuator Unlock Control
P	0.8 GY	295	Door Lock Actuator Lock Control
R	0.5 L-BU/BK	6624	Right Rear Side Impact Sensing Module Signal (ASF)
S	--	--	Not Used

Engine Control Module (ECM) X1 (Diesel)



Connector Part Information
Harness Type: Engine Chassis
OEM Connector: 13649839
Service Connector: 13574946
Description: 73-Way F MX123 34566 Series (BU)

Terminal Part Information
Pins: 1-3, 5-7, 9-11, 14-20, 22, 25-31, 33-36, 38-46, 48-59, 61-63, 65-72
Terminated Lead: 13575575
Release Tool: J-38125-213
Diagnostic Test Probe:J-35616-64B (L-BU)
Terminal/Tray: 33467-0005/23
Core/Insulation Crimp: Pins: 1-2, 6, 50, 53, 70 - K/K
Core/Insulation Crimp: Pins: 3, 5, 7, 9, 14-20, 22, 25-31, 33-36, 38-46, 48-49, 51-52, 54-59, 61-63, 65-69, 71-72 - J/J

Pin 73
Terminated Lead: Pending
Release Tool: J-38125-11A
Diagnostic Test Probe: J-35616-35 (VT)
Terminal/Tray: 7116-4152-02/9
Core/Insulation Crimp: A/5

Pin	Wire Color	Circuit No.	Function
1	0.8 BN/WH	3100	DEF Dosing Valve Low Control
2	0.8 BN	3099	DEF Dosing Valve High Control
3	0.5 D-BU	3105	DEF Smart Pump Control
4	--	--	Not Available
5	0.5 YE/BK	625	Starter Enable Relay Control
6	0.8 D-GN	3101	DEF Reverting Valve High Control
7	0.5 BN/WH	6783	Low Reference
8	--	--	Not Available
9	0.5 L-BU/WH	6311	Cruise/ETC/TCC Brake Signal
10	0.5 TN/WH	1695	Four Wheel Drive Wheel Lock Indicator (NQG)
11	0.5 GY/BK	1694	Four Wheel Drive Low Signal (NQG)
12-13	--	--	Not Available
14	0.5 GY	2365	5 Volt Reference
15	0.5 GY/BK	2931	Low Reference
16	0.5 L-BU/WH	6288	Low Reference
17	0.5 BN/WH	419	Check Engine Indicator Control
18	0.5 PU	2927	Hydrocarbon Injector Low Control
19	0.5 WH/BK	2366	Cooling Fan Control Relay Speed Signal
20	0.5 D-BU	507	Wait To Start Indicator Control
21	--	--	Not Available
22	0.5 TN	3657	Low Reference
23-24	--	--	Not Available
25	0.5 OG/BK	1786	Transmission Park/Neutral Signal
26	0.5 D-BU	5985	Accessory Wakeup Serial Data
27	0.5 TN	3661	Low Reference
28	0.5 TN/BK	6049	Low Reference
29	0.5 BN	3108	DEF Pressure Sensor Signal

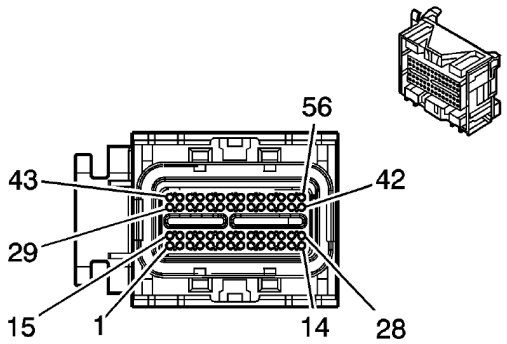
(continued on next page)

Engine Control Module (ECM) X1 (Diesel) (cont'd)

Pin	Wire Color	Circuit No.	Function
30	0.5 GY	3106	5 Volt Reference
31	0.5 TN	3107	Low Reference
32	--	--	Not Available
33	0.5 D-BU	2926	Hydrocarbon Injector High Control
34	0.5 D-GN/WH	459	A/C Compressor Clutch Relay Control
35	0.5 TN	3104	Low Reference
36	0.5 TN	5514	Low Reference
37	--	--	Not Available
38	0.5 L-BU	5377	Exhaust Gas Temperature Sensor 2 Signal
39	0.5 L-BU	1162	Accelerator Pedal Position Signal 2
40	0.5 TN/BK	6289	Induction Air Temperature Sensor Signal
41	0.5 D-BU	6053	Exhaust Pressure Sensor Signal 1
42	0.5 WH/BK	1164	5 Volt Reference
43	0.5 GY	6054	5 Volt Reference
44	0.5 YE	6055	Low Reference
45	0.5 L-GN	7494	High Speed GMLAN Serial Data (-) (3)
46	0.5 TN	2501	High Speed GMLAN Serial Data (-) (1)
47	--	--	Not Available
48	0.5 PK	439	Run/Crank Ignition 1 Voltage
49	0.5 YE	492	Mass Air Flow Sensor Signal
50	0.8 BN	25	Charge Indicator Control
51	0.5 PU	1272	Low Reference
52	0.5 L-GN/BK	822	Vehicle Speed Sensor Signal (except NQF or NQG)

Pin	Wire Color	Circuit No.	Function
53	0.8 BK	3102	DEF Reverting Valve Low Control
54	0.5 GY	3103	DEF Smart Pump Supply Voltage
55	0.5 BN	1271	Low Reference
56	0.5 D-BU/WH	3660	Exhaust Gas Temperature Sensor 4 Signal
57	0.5 L-GN	5378	Exhaust Gas Temperature Sensor 3 Signal
58	0.5 PU	1589	Primary Fuel Level Sensor Signal
59	0.5 OG/BK	380	A/C Refrigerant Pressure Sensor Signal
60	--	--	Not Available
61	0.5 D-BU	1161	Accelerator Pedal Position Signal 1
62	0.5 TN	1274	5 Volt Reference
63	0.5 GY	2700	5 Volt Reference
64	--	--	Not Available
65	0.5 D-GN	7493	High Speed GMLAN Serial Data (+) (3)
66	0.5 TN/BK	2500	High Speed GMLAN Serial Data (+) (1)
67	0.5 RD/WH	440	Battery Positive Voltage
68	0.5 YE	5991	Powertrain Relay Coil Control
69	0.5 D-BU	2364	Cooling Fan Speed Signal
70	0.8 GY	23	Generator Field Duty Cycle Signal
71	0.5 BN/WH	6141	Low Reference
72	0.5 OG/BK	6399	Replicated TOS Signal (except NQF or NQG)
73	3 PK	1439	Run/Crank Ignition 1 Voltage

Engine Control Module (ECM) X1 (HP2)



Connector Part Information
Harness: Engine
OEM: 13510837
Service: 88988373
Description: 56-Way F MX123 Series Sealed (BU Encased in BK)

Terminal Part Information
Pins: 3, 7, 8, 18-20, 55
Terminated Lead: 13575575
Release Tool: J-38125-213
Diagnostic Test Probe: J-35616-64B (L-BU)
Terminal/Tray: 33467-0005/23
Core/Insulation Crimp: J/J

Pins: 9, 12, 13, 33-37, 40, 41, 44, 47-49, 54
Terminated Lead: 13575811
Release Tool: J-38125-213
Diagnostic Test Probe: J-35616-64B (L-BU)
Terminal/Tray: 33467-0003/23
Core/Insulation Crimp: H/H

Pin	Wire Color	Circuit No.	Function
1-2	--	--	Not Used
3	0.5 PU	5531	Hood Switch Signal
4-6	--	--	Not Used
7	0.5 L-BU/WH	6311	Brake Pedal Switch Signal
8	0.5 PK/BK	109	Hood Ajar Switch Signal
9	0.35 TN/BK	6049	Low Reference
10-11	--	--	Not Used
12	0.35 BN/WH	419	Malfunction Indicator Lamp (MIL) Control
13	0.35 D-GN/WH	465	Fuel Pump Control Module Enable Signal
14-17	--	--	Not Used
18	0.5 D-BU	5985	Serial Data Wake-Up Signal
19	0.5 PK	439	Ignition Voltage
20	0.5 RD/WH	440	Battery Positive Voltage
21-32	--	--	Not Used
33	0.35 WH/BK	1164	5-Volt Reference 2
34	0.35 GY	2709	5-Volt Reference 1
35	0.35 TN	1274	5-Volt Reference 1
36	0.35 BN	1271	Low Reference
37	0.35 PU	1272	Low Reference
38-39	--	--	Not Used
40	0.35 YE	5991	Powertrain Relay Coil Control
41	0.35 PU	5128	High Speed Cooling Fan Relay Control
42-43	--	--	Not Used
44	0.35 PU	1589	Fuel Level Sensor Signal
45-46	--	--	Not Used
47	0.35 D-BU	1161	Accelerator Pedal Position Sensor 1 Signal
48	0.35 D-GN	890	Fuel Tank Pressure Sensor Signal
49	0.35 L-BU	1162	Accelerator Pedal Position Sensor 2 Signal
50-53	--	--	Not Used

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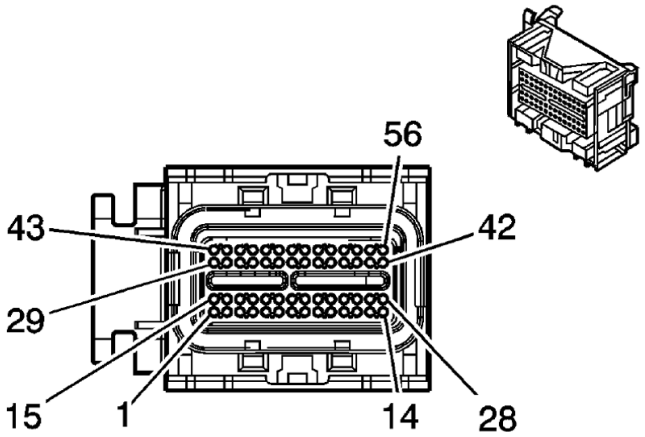
Engine Control Module (ECM) X1 (HP2) (cont'd)

Pin	Wire Color	Circuit No.	Function
54	0.35 D-GN	335	Medium Speed Cooling Fan Relay Control
55	0.5 WH	1310	EVAP Canister Vent Solenoid Control
56	--	--	Not Used

Engine Control Module (ECM) X1 (L96)



Connector Part Information
Harness: Engine
OEM: 13510837
Service: 88988373
Description: 56-Way F MX123 Series (BK)

Terminal Part Information
Pins: 2, 10, 12-14, 16, 24, 26, 28, 30, 34, 38, 40, 50, 52
Terminal/Tray: 33467-0003/23
Core/Insulation Crimp: H/H
Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

Pins: 3-5, 11, 18-20, 25, 27, 29, 31, 33, 39, 43, 45, 47, 53, 56
Terminal/Tray: 33467-0005/23
Core/Insulation Crimp: Pins: 3-5, 11, 18-20, 25, 27, 29, 31, 33, 39, 43, 45, 47, 56 - J/J
Core/Insulation Crimp: Pins: 53 - K/K
Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

Pin	Wire Color	Circuit No.	Function
1	--	--	Not Available
2	0.35 L-BU	1162	APP Sensor 2 Signal
3	0.5 YE	492	MAF Sensor Signal
4	0.5 GY/BK	1694	4WD Low Signal (NQG)
5	0.5 TN/WH	1695	Axle Switch Signal (NQG)
6-9	--	--	Not Available
10	0.35 D-BU	1161	APP Sensor 1 Signal
11	0.5 YE/WH	3200	Throttle Inlet Absolute Pressure Sensor Signal
12	0.35 OG/BK	380	A/C Refrigerant Pressure Sensor Signal (C67 or CJ2)
13	0.35 TN	5514	Low Reference
14	0.35 TN	1465	Fuel Pump Relay Control - Secondary
15	--	--	Not Available
16	0.35 TN	1274	5-Volt Reference 3
17	--	--	Not Available
18	0.5 D-BU	5985	Accessory Wakeup Serial Data
19	0.5 PK	439	Ignition 1 Voltage
20	0.5 RD/WH	440	Battery Positive Voltage
21-23	--	--	Not Available
24	0.35 WH/BK	1164	5-Volt Reference 4
25	0.5 GY/WH	3201	5-Volt Reference 1
26	0.35 GY/WH	2700	5-Volt Reference 1
27	0.5 YE/BK	625	Starter Enable Relay Control
28	0.35 D-GN/WH	465	Fuel Pump Relay Control - Primary
29	0.5 TN/BK	2500	High Speed GMLAN Serial Data Bus (+)
30	0.35 PU	1272	Low Reference
31	0.5 TN	2760	Low Reference
32	--	--	Not Available
33	0.5 L-BU/WH	6311	Brake Switch Signal
34	0.35 OG/BK	1786	Park/Neutral Signal
35-37	--	--	Not Available

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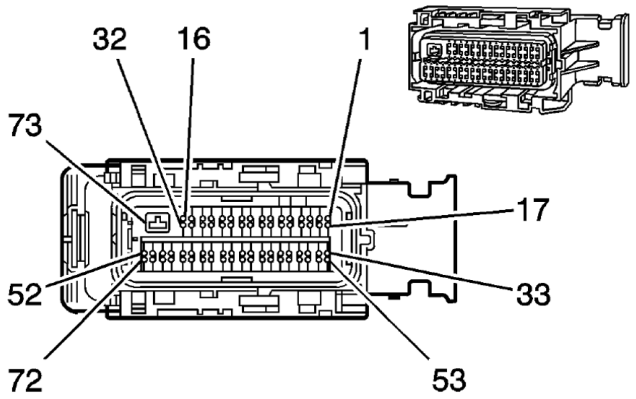
Engine Control Module (ECM) X1 (L96) (cont'd)

Pin	Wire Color	Circuit No.	Function
38	0.35 BN	1271	Low Reference
39	0.5 TN/WH	3202	Low Reference
40	0.35 YE	5991	Powertrain Relay Coil Control
41-42	--	--	Not Available
43	0.5 TN	2501	High Speed GMLAN Serial Data Bus (-)
44	--	--	Not Available
45	0.5 TN/BK	472	IAT Sensor Signal
46	--	--	Not Available
47	0.5 BN	25	Charge Indicator Signal
48-49	--	--	Not Available
50	0.35 YE/BK	1827	Vehicle Speed Signal
51	--	--	Not Available
52	0.35 BN/WH	419	MIL Control
53	0.8 D-GN/WH	459	A/C Compressor Clutch Relay Control (C67 or CJ2)
54-55	--	--	Not Available
56	0.5 WH	1310	EVAP Canister Vent Solenoid Control

Engine Control Module (ECM) X1 (LU3)



Connector Part Information
Harness: Engine
OEM: 15499466
Service: 88988931
Description: 73-Way F Receptacle 0.64 2.8 Series Sealed (BK)

Terminal Part Information
Pins: 1, 3, 5, 6, 8, 13, 18, 21, 24, 25, 27, 30, 32, 36, 39, 41, 42, 47, 49, 54, 57, 65-67
Terminated Lead: 13575811
Release Tool: J-38125-213
Diagnostic Test Probe: J-35616-64B (L-BU)
Terminal/Tray: 33467-0003/23
Core/Insulation Crimp: H/H

Pins: 2, 9, 10, 15-17, 19, 20, 34, 35, 37, 43, 44, 55, 58, 70-72
Terminated Lead: 13575575
Release Tool: J-38125-213
Diagnostic Test Probe: J-35616-64B (L-BU)
Terminal/Tray: 33467-0005/23
Core/Insulation Crimp: J/J

Pin: 73
Terminated Lead: Pending
Release Tool: J-38125-12A
Diagnostic Test Probe: J-35616-35 (VT)
Terminal/Tray: 1326030-8/17
Core/Insulation Crimp: A/4

Pin	Wire Color	Circuit No.	Function
1	0.35 D-BU	1161	APP Sensor 1 Signal
2	0.5 PU	1670	HO2S High Signal Bank 2 Sensor 2
3	0.5 D-BU	5985	Accessory Wakeup Serial Data
4	--	--	Not Used
5	0.35 D-GN	335	Low Speed Cooling Fan Relay Control
6	0.35 D-GN/WH	465	Fuel Pump Relay Control - Primary
7	--	--	Not Used
8	0.35 TN	514	Low Reference (CJ2 or C67)
9	0.5 TN/WH	1669	HO2S Low Signal Bank 1 Sensor 2
10	0.5 TN	1671	H02S Low Signal Bank 2 Sensor 2
11	0.5 BN	5360	Brake Apply Sensor Low Reference
12	--	--	Not Used
13	0.35 YE	5991	Powertrain Relay Coil Control
14	--	--	Not Used
15	0.5 GY/WH	3122	HO2S Heater Low Control Bank 1 Sensor 2
16	0.5 OG/WH	3223	HO2S Heater Low Control bank 1 Sensor 2
17	0.5 PU/WH	1668	HO2S High Signal Bank 1 Sensor 2
18	0.35 L-BU	1162	APP Sensor 2 Signal
19	0.5 PK	439	Ignition 1 Voltage
20	0.5 RD/WH	440	Battery Positive Voltage
21	0.35 PU	1272	Low Reference
22-23	--	--	Not Used

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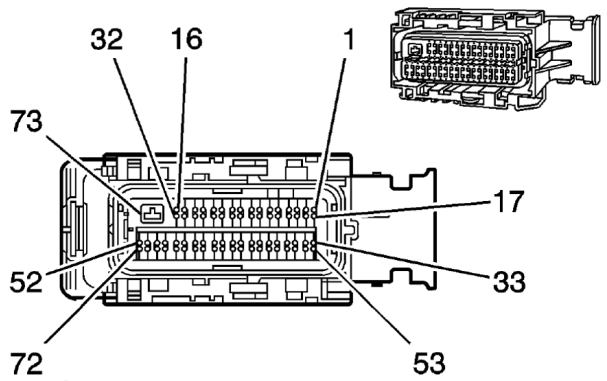
Engine Control Module (ECM) X1 (LU3) (cont'd)

Pin	Wire Color	Circuit No.	Function
24	0.35 TN/BK	6049	Low Reference
25	0.35 OG/BK	380	A/C Refrigerant Pressure Sensor Signal (CJ2 or C67)
26	0.5 GY/BK	1694	4WD Low Signal (NQG)
27	0.35 BN/WH	419	MIL Control
28-29	--	--	Not Used
30	0.35 D-GN/ WH	459	A/C Compressor Clutch Relay Control (CJ2 or C67)
31	--	--	Not Used
32	0.35 YE/BK	625	Starter Relay Coil Control
33	--	--	Not Used
34	0.5 L-GN/BK	822	Vehicle Speed Sensor (VSS) Low Signal (TZ0)
35	--	--	Not Used
36	0.35 YE	43	Ignition Voltage
37	0.5 YE	492	MAF Sensor Signal
38	--	--	Not Used
39	0.35 PU	1589	Fuel Level Sensor Signal - Primary
40	--	--	Not Used
41	0.35 BN	1271	Low Reference
42	0.35 D-GN	890	Fuel Tank Pressure Sensor Signal
43	0.5 TN/BK	2500	High Speed GMLAN Serial Data Bus (+)
44	0.5 TN	2501	High Speed GMLAN Serial Data Bus (-)
45	0.5 WH	5359	Brake Apply Sensor Supply Voltage
46	--	--	Not Used
47	0.35 WH/BK	1164	5-Volt Reference 2
48	--	--	Not Used

Pin	Wire Color	Circuit No.	Function
49	0.35 D-BU	473	High Speed Cooling Fan Relay Control
50	0.35 YE/BK	1827	Vehicle Speed Signal (except MEX)
51-53	--	--	Not Used
54	0.35 OG/BK	6399	Replicated TOS Signal (except TZ0)
	0.5 PU/WH	821	Vehicle Speed Sensor (VSS) High Signal (TZ0)
55	0.5 L-BU/WH	6311	TCC Brake Signal
56	0.35 WH/BK	1164	5-Volt Reference 2
57	0.35 OG/BK	1786	Park/Neutral Signal (except TZ0)
	0.35 D-GN	1433	Clutch Start Switch Signal (TZ0)
58	0.5 TN	472	IAT Sensor Signal (except MEX)
	0.5 TN/BK	472	IAT Sensor Signal (MEX)
59-60	--	--	Not Used
61	0.5 YE	5361	Brake Apply Sensor Signal
62-64	--	--	Not Used
65	0.35 GY	2700	5-Volt Reference 1
66	0.35 GY	2709	5-Volt Reference 1
67	0.35 TN	1274	5-Volt Reference 1
68-69	--	--	Not Used
70	0.5 WH	1310	EVAP Canister Vent Solenoid Control
71	0.5 L-BU	2182	Reverse Lamp Relay Control (TZ0)
72	0.5 TN/WH	1695	Axle Switch Signal (NQG)
73	0.5 PK	1339	Ignition 1 Voltage

Engine Control Module (ECM) X1 (L20, L9H, LC9 or LMG)



Connector Part Information
Harness: Engine
OEM: 13616079
Service: 88988931
Description: 73-Way F Receptacle 0.64 2.8 Series Sealed (BK)

Terminal Part Information
Pins: 1, 12, 13, 16, 17, 23, 24, 29-34, 36, 50, 51, 56-59, 68, 70, 71
Terminated Lead: 13575811
Release Tool: J-38125-213
Diagnostic Test Probe: J-35616-64B (L-BU)
Terminal/Tray: 33467-0003/23
Core/Insulation Crimp: H/H

Pins: 2, 3, 9-11, 18, 20, 26- 28, 37, 38, 41, 42, 47, 49, 52, 54, 61, 63-65, 69, 71, 72
Terminated Lead: 13575575
Release Tool: J-38125-213
Diagnostic Test Probe: J-35616-64B (L-BU)
Terminal/Tray: 33467-0005/23
Core/Insulation Crimp: J/J

Pin: 73
Terminated Lead: Pending
Release Tool: J-38125-11A
Diagnostic Test Probe: J-35616-35 (VT)
Terminal/Tray: 7116-4152-02/9
Core/Insulation Crimp: A/5

Pin	Wire Color	Circuit No.	Function
1	0.35 OG/BK	1786	Park/Neutral Signal
2	0.5 GY/BK	1694	4WD Low Signal (NQG)
3	0.5 TN/WH	1695	Axle Switch Signal (NQG)
4-8	--	--	Not Used
9	0.5 L-BU/WH	6311	Brake Switch Signal
10	0.5 PU/WH	1668	HO2S High Signal Bank 1 Sensor 2
11	0.5 TN/WH	1669	HO2S Low Signal Bank 1 Sensor 2
12	0.35 OG/BK	380	A/C Refrigerant Pressure Sensor Signal (CJ2 or C67)
13	0.35 TN	5514	Low Reference (CJ2 or C67)
14-15	--	--	Not Used
16	0.35 PU	1589	Fuel Level Sensor Signal - Primary
17	0.35 D-BU/ WH	473	High Speed Cooling Fan Relay Control
18	0.5 D-BU	5985	Accessory Wakeup Serial Data
19	0.5 PK	439	Ignition 1 Voltage
20	0.5 RD/WH	440	Battery Positive Voltage
21-22	--	--	Not Used
23	0.35 PU	1272	Low Reference
24	0.35 D-GN	890	Fuel Tank Pressure Sensor Signal
25	--	--	Not Used
26	0.5 YE	5361	Brake Apply Sensor Signal
27	0.5 TN/BK	2501	High Speed GMLAN Serial Data Bus (-)
28	0.5 TN/BK	2500	High Speed GMLAN Serial Data Bus (+)

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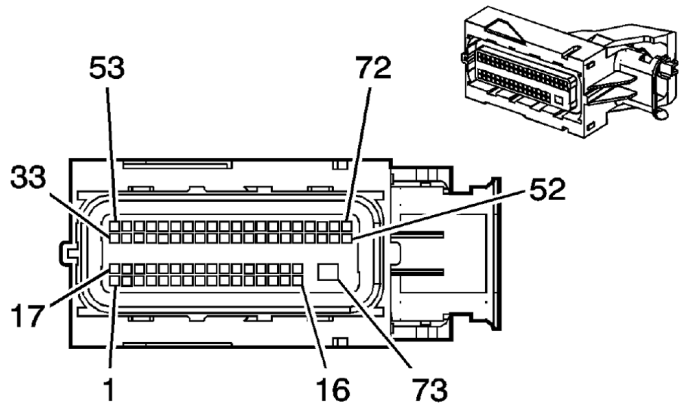
Engine Control Module (ECM) X1 (L20, L9H, LC9 or LMG), cont'd

Pin	Wire Color	Circuit No.	Function
29	0.35 D-BU	1161	APP Sensor 1 Signal
30	0.35 BN	1271	Low Reference
31	0.35 TN/BK	6049	Low Reference
32	0.35 L-BU	1162	APP Sensor 2 Signal
33	0.35 GY	2709	5-Volt Reference 1
34	0.35 GY/WH	2700	5-Volt Reference 1
35	0.5 TN	2760	Low Reference
36	0.35 TN	1274	5-Volt Reference 1
37	0.5 TN/BK	472	IAT Sensor Signal
38	0.5 TN	2760	Low Reference
39-40	--	--	Not Used
41	0.5 YE	492	MAF Sensor Signal
42	0.5 BN	5360	Brake Apply Sensor Low Reference
43-46	--	--	Not Used
47	0.5 PK/BK	1339	Ignition 1 Voltage
48	--	--	Not Used
49	0.5 TN	1671	HO2S Low Signal Bank 2 Sensor 2
50	0.35 D-GN/WH	465	Fuel Pump Control Module Enable Signal
51	--	--	Not Used
52	0.5 YE/BK	625	Starter Enable Relay Control
53	--	--	Not Used
54	0.5 WH	5359	Brake Apply Sensor Supply Voltage
55	--	--	Not Used
56	0.35 WH/BK	1164	5-Volt Reference 2
57	--	--	Not Used

Pin	Wire Color	Circuit No.	Function
58	0.35 D-GN	335	Low Speed Cooling Fan Relay Control
59	0.35 YE	5991	Powertrain Relay Coil Control
60	--	--	Not Used
61	0.5 WH	1310	EVAP Canister Venst Solenoid Control
62	--	--	Not Used
63	0.35 D-GN/WH	459	A/C Compressor Clutch Relay Control (CJ2 or C67)
64	0.5 OG/WH	3223	HO2S Heater Low Control Bank 2 Sensor 2
65	0.5 GY/WH	3122	HO2S Heater Low Control Bank 1 Sensor 2
66-67	--	--	Not Used
68	0.35 BN/WH	419	MIL Control
69	0.5 PU	1670	HO2S High Signal Bank 2 Sensor 2
70	--	--	Not Used
71	0.35 OG/BK	6399	Replicated TOS Signal (except 31 Series without NQF or NQG)
	0.5 PU/WH	821	Vehicle Speed Sensor (VSS) High Signal (MYC with NQG or NQH)
72	0.5 L-GN/BK	822	Vehicle Speed Sensor (VSS) Low Signal (MYC with NQG or NQH)
73	3 BK/WH	451	Ground

Engine Control Module (ECM) X2 (Diesel)



Connector Part Information
Harness Type: Engine
OEM Connector: 12603596
Service Connector: 13574947
Description: 73-Way F MX123 34566 Series (BK)

Terminal Part Information
Pins: 1, 3-11, 13-19, 21-22, 25, 27, 29-32, 41, 47-48, 66-67
Terminated Lead: 13575575
Release Tool: J-38125-213
Diagnostic Test Probe:J-35616-64B (L-BU)
Terminal/Tray: 33467-0005/23
Core/Insulation Crimp: Pins: 1, 3, 5-11, 22, 25, 27, 41, 47-48, 66-67 - K/K
Core/Insulation Crimp: Pins: 4, 13-19, 21, 29-32 - J/J

Pin 73
Terminated Lead: Pending
Release Tool: J-38125-11A
Diagnostic Test Probe: J-35616-35 (VT)
Terminal/Tray: 7116-4152-02/9
Core/Insulation Crimp: A/5

Pin	Wire Color	Circuit No.	Function
1	0.5 L-GN	497	Fuel Pump Primary Relay Control (N2N)
2	--	--	Not Available
3	0.5 YE	2928	Fuel Metering Valve High Control
4	0.8 PU/WH	2530	Fuel Rail Pressure Solenoid Supply Voltage
5	0.5 BK	2929	Fuel Metering Valve Low Control
6	0.5 WH	5931	Variable Nozzle Turbo Solenoid Low Signal
7	0.5 TN	2752	Low Reference
8	0.5 TN	2753	Low Reference
9	0.5 BN	1174	Oil Level Switch Signal
10	0.5 BN	6782	Low Reference
11	0.5 TN	3653	Low Reference (LML)
12	--	--	Not Available
13	0.8 BN/WH	4901	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 1
14	0.8 TN/WH	4907	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 7
15	0.8 L-BU	4804	Direct Fuel Injector (DFI) High Voltage Control Cylinder 4
16	0.8 BN	4801	Direct Fuel Injector (DFI) High Voltage Control Cylinder 1
17	0.8 BK/WH	451	Ground
18	0.8 BK/WH	451	Ground
19	0.8 YE	2834	Low Reference
20	--	--	Not Available
21	0.8 BK/WH	451	Ground
22	0.5 D-BU	5930	Variable Nozzle Turbo Solenoid High Signal
23-24	--	--	Not Available
25	0.5 OG/BK	5929	Low Reference
26	--	--	Not Available

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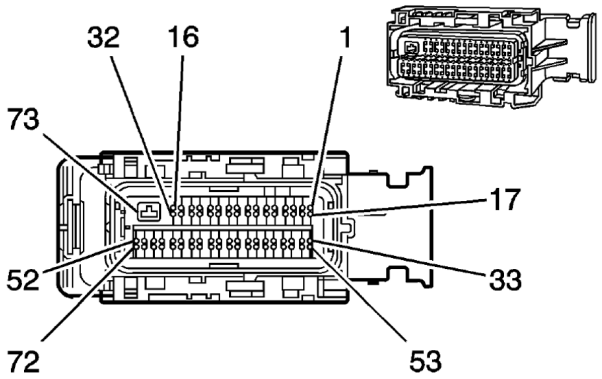
Engine Control Module (ECM) X2 (Diesel) (cont'd)

Pin	Wire Color	Circuit No.	Function
27	0.5 YE/BK	1827	Vehicle Speed Signal
28	--	--	Not Available
29	0.8 L-BU/WH	4904	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 4
30	0.8 PU/WH	4906	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 6
31	0.8 TN	4807	Direct Fuel Injector (DFI) High Voltage Control Cylinder 7
32	0.8 PU	4806	Direct Fuel Injector (DFI) High Voltage Control Cylinder 6
33-40	--	--	Not Available
41	0.5 BK	2755	Low Reference
42-46	--	--	Not Available
47	0.5 GY	2702	5 Volt Reference
48	0.5 GY	3652	5 Volt Reference (LML)
49-65	--	--	Not Available
66	0.5 TN	5928	Variable Nozzle Turbo Position Sensor Voltage Reference
67	0.5 PU/WH	6270	5 Volt Reference
68-72	--	--	Not Available
73	3 BK/WH	451	Ground

Engine Control Module (ECM) X2 (HP2)



Connector Part Information
Harness: Engine
OEM: 15499466
Service: 88988931
Description: 73-Way F MX123 Series, Sealed (BK)

Terminal Part Information
Pins: 1, 3, 5, 6, 8, 13, 18, 21, 24, 25, 27, 30, 32, 36, 39, 41, 42, 47, 49, 54, 57, 65-67
Terminated Lead: 13575811
Release Tool: J-38125-213
Diagnostic Test Probe: J-35616-64B (L-BU)
Terminal/Tray: 33467-0003/23
Core/Insulation Crimp: H/H

Pins: 2, 9, 10, 15-17, 19, 20, 34, 35, 37, 43, 44, 55, 58, 70-72
Terminated Lead: 13575575
Release Tool: J-38125-213
Diagnostic Test Probe: J-35616-64B (L-BU)
Terminal/Tray: 33467-0005/23
Core/Insulation Crimp: J/J

Pin: 73
Terminated Lead: Pending
Release Tool: J-38125-12A
Diagnostic Test Probe: J-35616-35 (VT)
Terminal/Tray: 1326030-8/17
Core/Insulation Crimp: A/4

Pin	Wire Color	Circuit No.	Function
1	0.5 PU	2121	Ignition Coil 1 Control
2	0.5 TN	1664	HO2S Low Signal - Bank 1 Sensor 1
3	0.5 PU/WH	1665	HO2S High Signal - Bank 1 Sensor 1
4	0.5 PU/WH	1668	HO2S High Signal - Bank 1 Sensor 2
5	0.5 TN/WH	1669	HO2S Low Signal - Bank 1 Sensor 2
6	0.8 L-BU	1876	Knock Sensor 2 Signal
7	0.8 GY	2303	Knock Sensor Signal
8	0.8 L-BU	496	Knock Sensor 1 Signal
9	0.8 GY	1716	Knock Sensor Signal
10	--	--	Not Used
11	0.5 YE	581	TAC Motor Control - 1
12	0.5 BN	582	TAC Motor Control - 2
13	0.5 PK	1339	Ignition Voltage
14	0.35 PU	5284	Cam Phasor Control
15	--	--	Not Used
16	0.5 PK/BK	1746	Fuel Injector 3 Control
17	0.5 PU/WH	2128	Ignition Coil 8 Control
18	0.5 D-GN/WH	2124	Ignition Coil 4 Control
19	0.5 BN/WH	2130	Low Reference
20-22	--	--	Not Used
23	0.35 BN	6266	Low Reference
24	0.5 BK	2755	Low Reference
25-26	--	--	Not Used
27	0.35 GY/BK	6272	Low Reference
28	0.5 PK/BK	1339	Ignition Voltage

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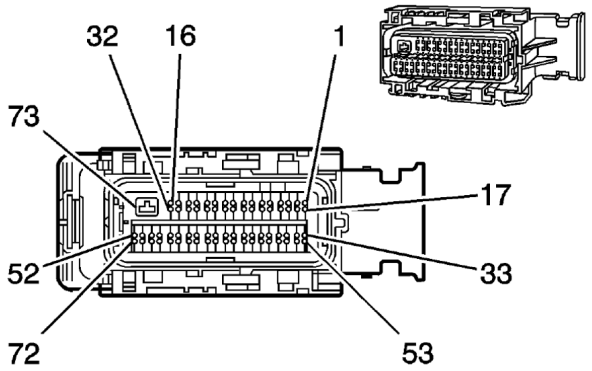
Engine Control Module (ECM) X2 (HP2) (cont'd)

Pin	Wire Color	Circuit No.	Function
29	0.35 TN	2752	Low Reference
30-31	--	--	Not Used
32	0.5 L-GN/BK	1745	Fuel Injector 2 Control
33	0.5 OG	2127	Ignition Coil 7 Control
34	0.5 D-GN	2125	Ignition Coil 5 Control
35	0.5 BN	2129	Low Reference
36-38	--	--	Not Used
39	0.35 D-BU	6259	5-Volt Reference 1
40	0.5 GY	2705	5-Volt Reference 1
41	--	--	Not Used
42	0.5 TN	2760	Low Reference
43	0.35 PU/WH	6270	5-Volt Reference 2
44	0.35 GY	2701	5-Volt Reference 2
45	--	--	Not Used
46	0.35 TN	2199	Low Reference
47	--	--	Not Used
48	0.5 D-BU/WH	878	Fuel Injector 8 Control
49	0.5 TN/WH	845	Fuel Injector 5 Control
50-51	--	--	Not Used
52	0.5 YE/BK	846	Fuel Injector 6 Control
53	0.5 OG/WH	2122	Ignition Coil 2 Control
54	0.5 L-BU/WH	2126	Ignition Coil 6 Control
55	0.5 L-BU	2123	Ignition Coil 3 Control

Pin	Wire Color	Circuit No.	Function
56-58	--	--	Not Used
59	0.35 D-BU/ WH	6265	Camshaft Position Sensor Signal
60	0.5 TN/WH	331	Oil Pressure Sensor Signal
61	--	--	Not Used
62	0.5 TN/BK	472	Intake Air Temperature (IAT) Sensor Signal
63	0.35 WH/BK	6271	Crankshaft Position Sensor Signal
64	0.35 D-GN	485	Throttle Position Sensor 1 Signal
65	--	--	Not Used
66	0.35 PU	486	Throttle Position Sensor 2 Signal
67	0.5 YE	492	Mass Air Flow (MAF) Sensor Signal
68	0.5 GY/WH	3113	HO2S Heater Low Control - Bank 1 Sensor 1
69	0.5 GY/WH	3122	HO2S Heater Low Control - Bank 2 Sensor 1
70	0.5 L-BU/BK	844	Fuel Injector 4 Control
71	0.5 OG/BK	877	Fuel Injector 7 Control
72	0.5 TN	1744	Fuel Injector 1 Control
73	3 BK/WH	451	Ground

Engine Control Module (ECM) X2 (L96)



Connector Part Information
Harness: Engine
OEM: 15499466
Service: 88988931
Description: 73-Way F MX123 Series, Sealed (BK)

Terminal Part Information
Pins: 11, 24, 29, 40, 43-44, 60, 63, 65
Terminal/Tray: 33467-0003/23
Core/Insulation Crimp: H/H
Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

Pins: 3-5, 11, 18-20, 25, 27, 29, 31, 33, 39, 43, 45, 47, 53, 56
Terminal/Tray: 33467-0005/23
Core/Insulation Crimp: Pins: 1-9, 15-20, 25, 28, 33-36, 41, 47-50, 52-56, 61, 67-70, 72 - J/J
Core/Insulation Crimp: Pins: 49-50, 69-70 - K/K
Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

Pins: 73
Terminal/Tray: 7116-4152-02/9
Core/Insulation Crimp: A/5
Release Tool/Test Probe: J-38125-11A/J-35616-35 (VT)

Pin	Wire Color	Circuit No.	Function
1	0.5 PU	2121	IC 1 Control
2	0.5 TN	1744	Fuel Injector 1 Control
3	0.5 D-BU/WH	878	Fuel Injector 8 Control
4	0.5 OG/BK	877	Fuel Injector 7 Control
5	0.5 L-GN/BK	1745	Fuel Injector 2 Control
6	0.5 YE/BK	846	Fuel Injector 6 Control
7	0.5 TN/WH	845	Fuel Injector 5 Control
8	0.5 L-BU/BK	844	Fuel Injector 4 Control
9	0.5 PK/BK	1746	Fuel Injector 3 Control
10	--	--	Not Available
11	0.35 PU	5284	Camshaft Actuator Solenoid Control
12-14	--	--	Not Available
15	0.5 YE	581	TAC Motor Control - 1
16	0.5 BN	582	TAC Motor Control - 2
17	0.5 PU/WH	2128	IC 8 Control
18	0.5 D-GN/WH	2124	IC 4 Control
19	0.5 BN/WH	2130	Low Reference
20	0.5 GY	6272	Low Reference
21-23	--	--	Not Available
24	0.35 BN	6266	Low Reference
25	0.5 BK	2755	Low Reference
26-27	--	--	Not Available
28	0.5 PK/BK	1339	Ignition 1 Voltage
29	0.35 TN	2199	Low Reference
30-32	--	--	Not Available
33	0.5 OG	2127	IC 7 Control
34	0.5 D-GN	2125	IC 5 Control
35	0.5 BN	2129	Low Reference
36	0.5 PU	6270	5-Volt Reference 2
37-39	--	--	Not Available

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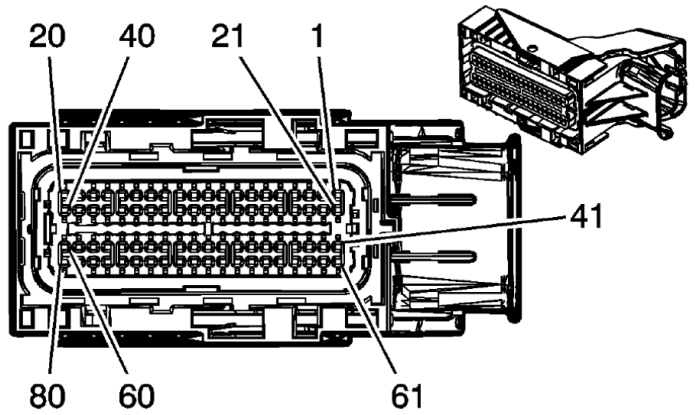
Engine Control Module (ECM) X2 (L96) (cont'd)

Pin	Wire Color	Circuit No.	Function
40	0.35 D-BU	6259	5-Volt Reference 1
41	0.5 GY	2705	5-Volt Reference 1
42	--	--	Not Available
43	0.35 GY	2701	5-Volt Reference 4
44	0.35 TN	2752	Low Reference
45-46	--	--	Not Available
47	0.5 TN	1664	HO2S Low Signal - Bank 1 Sensor 1
48	0.5 TN	1667	HO2S Low Signal - Bank 2 Sensor 1
49	0.8 GY	1716	KS 1 Signal
50	0.8 GY	2303	KS 2 Signal
51	--	--	Not Available
52	0.5 L-GN	3212	HO2S Heater Low Control - Bank 2 Sensor 1
53	0.5 OG/WH	2122	IC 2 Control
54	0.5 L-BU/WH	2126	IC 6 Control
55	0.5 L-BU	2123	IC 3 Control
56	0.5 L-GN	6271	CKP Sensor Signal

Pin	Wire Color	Circuit No.	Function
57-59	--	--	Not Available
60	0.35 D-BU/ WH	6265	CMP Sensor Signal
61	0.5 TN/WH	331	Oil Pressure Sensor Signal
62	--	--	Not Available
63	0.35 D-GN	485	TP Sensor 1 Signal
64	--	--	Not Available
65	0.35 PU	486	TP Sensor 2 Signal
66	--	--	Not Available
67	0.5 PU/WH	1665	HO2S High Signal - Bank 1 Sensor 1
68	0.5 PU	1666	HO2S High Signal - Bank 2 Sensor 1
69	0.8 D-BU	496	KS 1 Signal
70	0.8 L-BU	1876	KS 2 Signal
71	--	--	Not Available
72	0.5 GY/WH	3113	HO2S Heater Low Control - Bank 1 Sensor 1
73	3 BK/WH	451	Ground

Engine Control Module (ECM) X2 (LMG, LC9, LY5, LH6, L76 or L9H without Y91)



Connector Part Information
Harness: Engine
OEM: 13528613
Service: 19115670
Description: 80-Way F 0.64 Sealed (GY)

Terminal Part Information
Pins: 2, 3, 16, 35, 44, 52, 63-66, 68, 69
Terminated Lead: 13575811
Release Tool: J-38125-213
Diagnostic Test Probe: J-35616-64B (L-BU)
Terminal/Tray: 33467-0003/23
Core/Insulation Crimp: H/H

Pins: 6, 8-14, 17-22, 26, 27, 29, 30, 32, 34, 37-41, 43, 50, 53, 56-61, 70-79
Terminated Lead: 13575575
Release Tool: J-38125-213
Diagnostic Test Probe: J-35616-64B (L-BU)
Terminal/Tray: 33467-0005/23
Core/Insulation Crimp: J/J

Pin	Wire Color	Circuit No.	Function
1	--	--	Not Used
2	0.35 PU/WH	6270	5-Volt Reference 2
3	0.35 GY	2701	5-Volt Reference 2
4	--	--	Not Used
5	0.5 BN	582	TAC Motor Control - 2
6	0.5 YE	581	TAC Motor Control - 1
7	--	--	Not Used
8	0.5 D-GN/WH	428	EVAP Canister Purge Solenoid Control
9	0.5 GY	5493	Cylinder Shutoff Solenoid Control (3) (except L9H)
10	0.5 D-BU	5491	Cylinder Shutoff Solenoid Control (1) (except L9H)
11	0.5 OG	5494	Cylinder Shutoff Solenoid Control (4) (except L9H)
12	0.5 GY/WH	3113	HO2S Heater Low Control - Bank 1 Sensor 1
13	0.5 L-GN	3212	HO2S Heater Low Control - Bank 2 Sensor 1
14	0.5 L-GN/BK	5492	Cylinder Shutoff Solenoid Control (2) (except L9H)
15	--	--	Not Used
16	0.35 PU	5284	Camshaft Actuator Solenoid Control (L76 or L9H)
17	0.5 D-BU/WH	878	Fuel Injector 8 Control
18	0.5 TN/WH	845	Fuel Injector 5 Control
19	0.5 YE/BK	846	Fuel Injector 6 Control
20	0.5 TN	1744	Fuel Injector 1 Control
21	0.5 YE	410	ECT Sensor Signal
22	0.5 TN	2761	Low Reference
23-25	--	--	Not Used
26	0.8 D-BU	496	KS 1 Signal
27	0.8 GY	1716	KS 1 Signal

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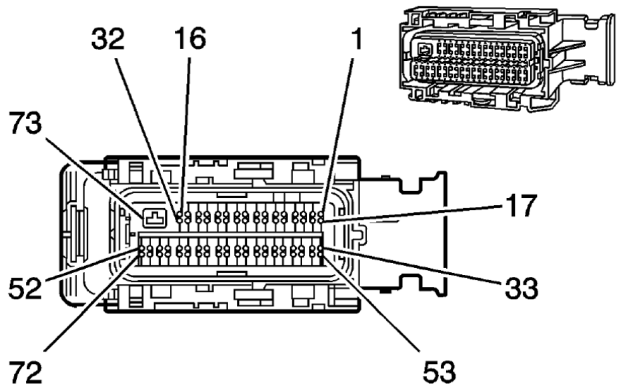
Engine Control Module (ECM) X2 (LMG, LC9, LY5, LH6, L76 or L9H without Y91) (cont'd)

Pin	Wire Color	Circuit No.	Function
28	--	--	Not Used
29	0.8 L-BU	1876	KS 2 Signal
30	0.8 GY	2303	KS 2 Signal
31	--	--	Not Used
32	0.5 GY	23	Generator Field Duty Cycle Signal
33	--	--	Not Used
34	0.5 BK	2755	Low Reference
35	0.35 TN	2752	Low Reference
36	--	--	Not Used
37	0.5 L-GN/BK	1745	Fuel Injector 2 Control
38	0.5 PK/BK	1746	Fuel Injector 3 Control
39	0.5 L-BU/BK	844	Fuel Injector 4 Control
40	0.5 OG/BK	877	Fuel Injector 7 Control
41	0.5 GY/WH	2705	5-Volt Reference 1
42	--	--	Not Used
43	0.5 GY	2704	5-Volt Reference 1
44	0.35 D-BU	6259	5-Volt Reference 1
45-49	--	--	Not Used
50	0.5 TN/WH	331	Oil Pressure Sensor Signal
51	--	--	Not Used
52	0.35 TN	2199	Low Reference (L76 or L9H)
53	0.5 OG/BK	469	Low Reference
54-55	--	--	Not Used
56	0.5 TN	1664	HO2S Low Signal - Bank 1 Sensor 1
57	0.5 PU/WH	1665	HO2S High Signal - Bank 1 Sensor 1
58	0.5 L-GN	432	MAP Sensor Signal
59	0.5 PU	1666	HO2S High Signal - Bank 2 Sensor 1
60	0.5 TN	1667	H02S Low Signal - Bank 2 Sensor 1
61	0.5 BN	25	Charge Indicator Signal
62	--	--	Not Used
63	0.35 PU	486	TP Sensor 2 Signal
64	0.35 D-BU/ WH	6265	CMP Sensor Signal
65	0.35 D-GN	485	TP Sensor 1 Signal
66	0.35 BN	6266	Low Reference
67	--	--	Not Used
68	0.35 WH/BK	6271	CKP Sensor Signal
69	0.35 GY/BK	6272	Low Reference
70	0.5 PU	2121	IC 1 Control
71	0.5 PU/WH	2128	IC 8 Control
72	0.5 OG	2127	IC 7 Control
73	0.5 OG/WH	2122	IC 2 Control
74	0.5 L-BU/WH	2126	IC 6 Control
75	0.5 D-GN	2125	IC 5 Control
76	0.5 D-GN/WH	2124	IC 4 Control
77	0.5 L-BU	2123	IC 3 Control
78	0.5 BN	2129	Low Reference
79	0.5 BN/WH	2130	Low Reference
80	--	--	Not Used

Engine Control Module (ECM) X2 (LU3)



Connector Part Information
Harness: Engine
OEM: 15497996
Service: 88988372
Description: 73-Way F 0.64 2.8 Series Sealed (GY)

Terminal Part Information
Pins: 4, 6-13, 16, 22-24, 30-32, 35-39, 41, 43, 48-51, 58, 65-66, 68, 70-71
Terminated Lead: 13575575
Release Tool: J-38125-213
Diagnostic Test Probe: J-35616-64B (L-BU)
Terminal/Tray: 33467-0005/23
Core/Insulation Crimp: J/J

Pins: 5, 20, 33, 44-46, 53-54, 57, 59
Terminated Lead: 13575811
Release Tool: J-38125-213
Diagnostic Test Probe: J-35616-64B (L-BU)
Terminal/Tray: 33467-0003/23
Core/Insulation Crimp: H/H

Pin: 73
Terminated Lead: 13579751
Release Tool: J-38125-12A
Diagnostic Test Probe: J-35616-35 (VT)
Terminal/Tray: 1326030-8/17
Core/Insulation Crimp: 4/D

Pin	Wire Color	Circuit No.	Function
1-3	--	--	Not Used
4	0.5 TN	2761	Low Reference
5	0.35 GY/BK	6272	Low Reference
6	0.5 TN	1744	Fuel Injector 1 Control
7	0.5 YE/BK	846	Fuel Injector 6 Control
8	0.5 TN/WH	845	Fuel Injector 5 Control
9	0.5 BN	2129	Low Reference
10	0.5 L-BU/BK	844	Fuel Injector 4 Control
11	0.5 PK/BK	1746	Fuel Injector 3 Control
12	0.5 L-GN/BK	1745	Fuel Injector 2 Control
13	0.5 GY	2704	5-Volt Reference 1
14-15	--	--	Not Used
16	0.5 YE	581	TAC Motor Control - 1
17-19	--	--	Not Used
20	0.35 BN	6266	Low Reference
21	--	--	Not Used
22	0.5 PU	2121	IC 1 Control
23	0.5 L-BU	2123	IC 3 Control
24	0.5 OG/WH	2122	IC 2 Control
25-29	--	--	Not Used
30	0.5 D-GN/WH	428	EVAP Canister Purge Solenoid Control
31	0.5 BN	25	Charge Indicator Signal
32	0.5 BN	582	TAC Motor Control - 2
33	0.35 D-BU	6259	5-Volt Reference 1
34	--	--	Not Used
35	0.5 GY	2705	5-Volt Reference 1
36	0.5 TN/WH	331	Oil Pressure Sensor Signal

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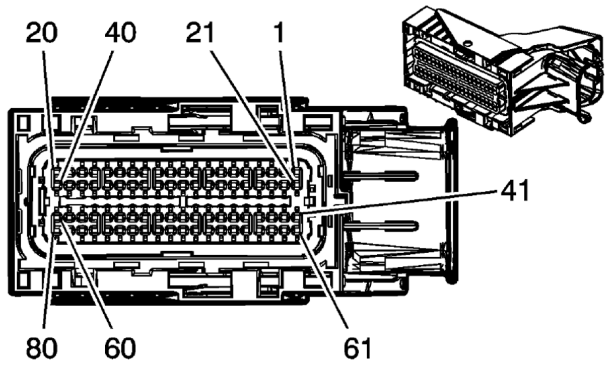
Engine Control Module (ECM) X2 (LU3) (cont'd)

Pin	Wire Color	Circuit No.	Function
37	0.5 PU/WH	1665	HO2S High Signal Bank 1 Sensor 1
38	0.5 PU	1666	HO2S High Signal Bank 2 Sensor 1
39	0.5 L-GN	432	MAP Sensor Signal
40	0.35 TN	2752	Low Reference
41	0.5 BK	2755	Low Reference
42	--	--	Not Used
43	0.5 GY	23	Generator Field Duty Cycle Signal
44	--	--	Not Used
45	0.35 WH/BK	6271	CKP Sensor Signal
46	0.35 D-BU/ WH	6265	CMP Sensor Signal
47	--	--	Not Used
48	0.5 TN	1664	HO2S Low Signal Bank 1 Sensor 1
49	0.5 OG/BK	469	Low Reference
50	0.5 GY	1716	KS 1 Signal
51	0.5 D-BU	496	KS 1 Signal
52	--	--	Not Used
53	0.35 GY	2701	5-Volt Reference 2

Pin	Wire Color	Circuit No.	Function
54	0.35 PU/WH	6270	5-Volt Reference 2
55-56	--	--	Not Used
57	0.35 D-GN	485	TP Sensor 1 Signal
58	0.5 YE	410	ECT Sensor Signal
59	0.35 PU	486	TP Sensor 2 Signal
60-64	--	--	Not Used
65	0.5 GY/WH	3113	HO2S Heater Low Control Bank 1 Sensor 1
66	0.5 L-GN	3212	HO2S Heater Low Control Bank 2 Sensor 1
67	--	--	Not Used
68	0.5 TN	1667	HO2S Low Signal Bank 2 Sensor 1
69	--	--	Not Used
70	0.5 GY	2303	KS 2 Signal
71	0.5 L-BU	1876	KS 2 Signal
72	--	--	Not Used
73	3 BK/WH	451	Ground

Engine Control Module (ECM) X2 (LY2, LY6 or L9H with Y91)



Connector Part Information
Harness Type: Engine
OEM Connector: 13528613
Service Connector: 19115670
Description: 80-Way F MX123 34566 Series (GY)

Terminal Part Information
Pins: 2-3, 16, 35, 44, 52, 58, 63-66, 68-69
Terminated Lead: 13575811
Release Tool: J-38125-213
Diagnostic Test Probe: J-35616-64B (L-BU)
Terminal/Tray: 33467-0003/23
Core/Insulation Crimp: H/H

Pins: 5-6, 8, 12-13, 17-22, 26-27, 29-30, 32, 34, 37-41, 43, 50, 53, 56-61, 70-79
Terminated Lead: 13575575
Release Tool: J-38125-213
Diagnostic Test Probe: J-35616-64B (L-BU)
Terminal/Tray: 33467-0005/23
Core/Insulation Crimp: Pins: 5-6, 8, 12-13, 17-22, 32, 34, 37-41, 43, 50, 53, 56-61, 70-79 - J/J
Core/Insulation Crimp: Pins: 26-27, 29-30 - K/K

Pin	Wire Color	Circuit No.	Function
1	--	--	Not Used
2	0.35 PU/WH	6270	5-Volt Reference 2
3	0.35 GY	2701	5-Volt Reference 2
4	--	--	Not Used
5	0.5 BN	582	TAC Motor Control - 2
6	0.5 YE	581	TAC Motor Control - 1
7	--	--	Not Used
8	0.5 D-GN/WH	428	EVAP Canister Purge Solenoid Control
9-11	--	--	Not Used
12	0.5 GY/WH	3113	HO2S Heater Low Control - Bank 1 Sensor 1
13	0.5 L-GN	3212	HO2S Heater Low Control - Bank 2 Sensor 1
14-15	--	--	Not Used
16	0.35 PU	5284	Camshaft Actuator Solenoid Control (LY6 or L9H)
17	0.5 D-BU/WH	878	Fuel Injector 8 Control
18	0.5 TN/WH	845	Fuel Injector 5 Control
19	0.5 YE/BK	846	Fuel Injector 6 Control
20	0.5 TN	1744	Fuel Injector 1 Control
21	0.5 YE	410	ECT Sensor Signal
22	0.5 TN	2761	Low Reference
23-25	--	--	Not Used
26	0.8 D-BU	496	KS 1 Signal
27	0.8 GY	1716	KS 1 Signal
28	--	--	Not Used
29	0.8 L-BU	1876	KS 2 Signal
30	0.8 GY	2303	KS 2 Signal
31	--	--	Not Used

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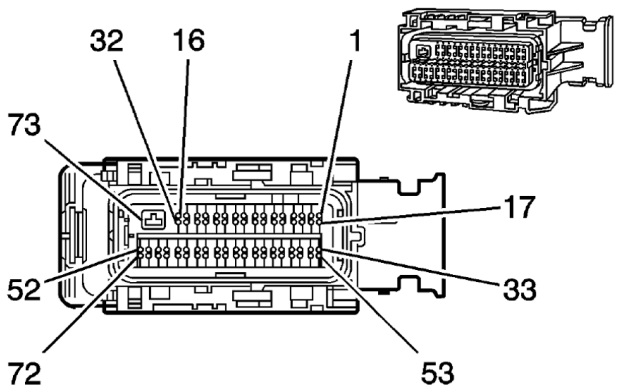
Engine Control Module (ECM) X2 (LY2, LY6 or L9H with Y91) (cont'd)

Pin	Wire Color	Circuit No.	Function
32	0.5 GY	23	Generator Field Duty Cycle Signal
33	--	--	Not Used
34	0.5 BK	2755	Low Reference
35	0.35 TN	2752	Low Reference
36	--	--	Not Used
37	0.5 L-GN/BK	1745	Fuel Injector 2 Control
38	0.5 PK/BK	1746	Fuel Injector 3 Control
39	0.5 L-BU/BK	844	Fuel Injector 4 Control
40	0.5 OG/BK	877	Fuel Injector 7 Control
41	0.5 GY/WH	2705	5-Volt Reference 1
42	--	--	Not Used
43	0.5 GY	2704	5-Volt Reference 1
44	0.35 D-BU	6259	5-Volt Reference 1
45-49	--	--	Not Used
50	0.35 TN/WH	331	Oil Pressure Sensor Signal
51	--	--	Not Used
52	0.35 TN	2199	Low Reference (LY6 or L9H)
53	0.5 OG/BK	469	Low Reference
54-55	--	--	Not Used
56	0.5 TN	1664	HO2S Low Signal - Bank 1 Sensor 1
57	0.5 PU/WH	1665	HO2S High Signal - Bank 1 Sensor 1
58	0.5 L-GN	432	MAP Sensor Signal

Pin	Wire Color	Circuit No.	Function
59	0.5 PU	1666	HO2S High Signal - Bank 2 Sensor 1
60	0.5 TN	1667	H02S Low Signal - Bank 2 Sensor 1
61	0.5 BN	25	Charge Indicator Signal
62	--	--	Not Used
63	0.35 PU	486	TP Sensor 2 Signal
64	0.35 D-BU/ WH	6265	CMP Sensor Signal
65	0.35 D-GN	485	TP Sensor 1 Signal
66	0.35 BN	6266	Low Reference
67	--	--	Not Used
68	0.35 WH/BK	6271	CKP Sensor Signal
69	0.35 GY/BK	6272	Low Reference
70	0.5 PU	2121	IC 1 Control
71	0.5 PU/WH	2128	IC 8 Control
72	0.5 OG	2127	IC 7 Control
73	0.5 OG/WH	2122	IC 2 Control
74	0.5 L-BU/WH	2126	IC 6 Control
75	0.5 D-GN	2125	IC 5 Control
76	0.5 D-GN/WH	2124	IC 4 Control
77	0.5 L-BU	2123	IC 3 Control
78	0.5 BN	2129	Low Reference
79	0.5 BN/WH	2130	Low Reference
80	--	--	Not Used

Engine Control Module (ECM) X3 (HP2)



Connector Part Information
Harness: Engine
OEM: 15497996
Service: 88988372
Description: 73-Way F 0.64 2.8 Series, Sealed (GY Encased in BK)

Terminal Part Information
Pins: 4, 6-13, 16, 22-24, 30-32, 35-39, 41, 43, 48-51, 58, 65-66, 68, 70-71
Terminated Lead: 13575575
Release Tool: J-38125-213
Diagnostic Test Probe: J-35616-64B (L-BU)
Terminal/Tray: 33467-0005/23
Core/Insulation Crimp: J/J

Pins: 5, 20, 33, 44-46, 53-54, 57, 59
Terminated Lead: 13575811
Release Tool: J-38125-213
Diagnostic Test Probe: J-35616-64B (L-BU)
Terminal/Tray: 33467-0003/23
Core/Insulation Crimp: H/H

Pin: 73
Terminated Lead: 13579751
Release Tool: J-38125-12A
Diagnostic Test Probe: J-35616-35 (VT)
Terminal/Tray: 1326030-8/17
Core/Insulation Crimp: 4/D

Pin	Wire Color	Circuit No.	Function
1-2	--	--	Not Used
3	0.5 TN	1667	HO2S Low Signal - Bank 2 Sensor 1
4	0.5 PU	1666	HO2S High Signal - Bank 2 Sensor 1
5	0.5 PU	1670	HO2S High Signal - Bank 2 Sensor 2
6	0.5 TN	1671	HO2S Low Signal - Bank 2 Sensor 2
7	--	--	Not Used
8	0.5 D-BU	941	Low Temperature Cooling Pump Motor Ground
9	--	--	Not Used
10	0.35 GY	5493	Valve Lifter Oil Manifold (VLOM) Assembly Cylinder 6 Shutoff Solenoid
11	0.35 D-BU	5491	Valve Lifter Oil Manifold (VLOM) Assembly Cylinder 1 Shutoff Solenoid
12-14	--	--	Not Used
15	0.5 L-GN	3212	HO2S Heater Low Control - Bank 2 Sensor 1
16-20	--	--	Not Used
21	0.35 TN	5514	Low Reference
22	0.5 OG/BK	469	Low Reference
23	0.5 OG/BK	469	Low Reference
24-32	--	--	Not Used
33	0.5 L-BU	6106	PTLAN -
34	--	--	Not Used
35	0.5 TN	2761	Low Reference
36	0.5 TN	955	Low Reference

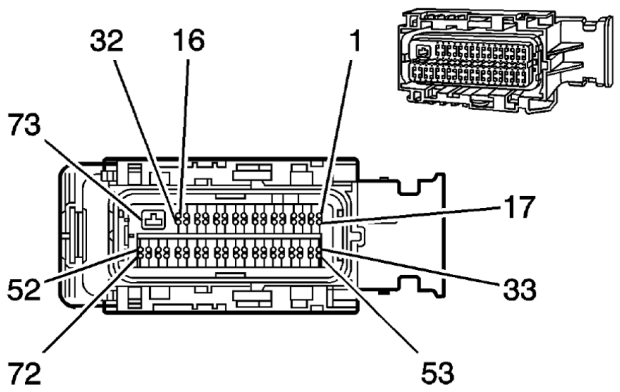
(continued on next page)

Engine Control Module (ECM) X3 (HP2) (cont'd)

Pin	Wire Color	Circuit No.	Function
37	0.35 GY	2700	5-Volt Reference 1
38	0.5 GY	2704	5-Volt Reference
39	0.5 GY	2704	5-Volt Reference 1
40-46	--	--	Not Used
47	0.5 TN	2501	High Speed GMLAN Serial Data Bus (-)
48	0.5 D-GN/WH	428	EVAP Canister Purge Solenoid Control
49	0.35 D-BU	473	Low Speed Cooling Fan Relay Control
50	0.5 OG/WH	3223	HO2S Heater Low Control - Bank 2 Sensor 2
51	0.5 TN	2501	High Speed GMLAN Serial Data Bus (-)
52	0.5 TN	2501	High Speed GMLAN Serial Data Bus (-)
53	0.5 D-BU	6105	PTLAN +
54	--	--	Not Used
55	0.5 YE	410	Engine Coolant Temperature (ECT) Sensor Signal
56	0.5 YE	954	5-Volt Reference
57	0.35 OG/BK	380	A/C Refrigerant Pressure Sensor Signal

Pin	Wire Color	Circuit No.	Function
58	0.5 L-GN	432	Barometric Pressure Sensor Signal
59	0.5 L-GN	432	Manifold Absolute Pressure (MAP) Sensor Signal
60-65	--	--	Not Used
66	0.35 OG/BK	6399	Vehicle Speed Signal (except NQH)
	0.5 PU/WH	821	Vehicle Speed Sensor (VSS) High Signal (NQH)
67	0.5 L-GN/BK	822	Vehicle Speed Sensor (VSS) Low Signal (NQH)
68	0.35 L-GN	5492	Valve Lifter Oil Manifold (VLOM) Assembly Cylinder 7 Shutoff Solenoid
69	0.35 OG	5494	Valve Lifter Oil Manifold (VLOM) Assembly Cylinder 4 Shutoff Solenoid
70	0.5 TN/BK	2500	High Speed GMLAN Serial Data Bus (+)
71	0.5 TN/BK	2500	High Speed GMLAN Serial Data Bus (+)
72	0.5 TN/BK	2500	High Speed GMLAN Serial Data Bus (+)
73	3 BK/WH	451	Ground

Engine Control Module (ECM) X3 (L96)



Connector Part Information
Harness: Engine
OEM: 15497996
Service: 88988372
Description: 73-Way F 64/2.8 Series, Sealed (BK)

Terminal Part Information
Pins: 27, 43-44, 55, 63-64
Terminal/Tray: 33467-0003/23
Core/Insulation Crimp: H/H
Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

Pins: 10, 16-17, 22, 28-30, 32, 38, 45-46, 48-49, 58, 65-68
Terminal/Tray: 33467-0005/23
Core/Insulation Crimp: J/J
Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

Pin	Wire Color	Circuit No.	Function
1-9	--	--	Not Available
10	0.5 D-GN/WH	428	EVAP Canister Purge Solenoid Control
11-15	--	--	Not Available
16	0.5 OG/WH	3223	HO2S Heater Low Control Bank 2 Sensor 2
17	0.5 GY	23	Generator Field Duty Cycle Signal
18-21	--	--	Not Available
22	0.5 BN	5360	Brake Apply Sensor Low Reference
23-26	--	--	Not Available
27	0.35 TN/BK	6049	Low Reference
28	0.5 GY	2704	5-Volt Reference 3
29	0.5 OG/BK	469	Low Reference
30	0.5 TN	2761	Low Reference
31	--	--	Not Available
32	0.5 GY/WH	3122	HO2S Heater Low Control Bank 2 Sensor 1
33-37	--	--	Not Available
38	0.5 WH	5359	Brake Apply Sensor Supply Voltage
39-42	--	--	Not Available
43	0.35 GY	2709	5-Volt Reference 1
44	0.5 YE	410	ECT Sensor Signal
45	0.5 L-GN	432	MAP Sensor Signal
47	--	--	Not Available
48	0.5 PU/WH	821	VSS High Signal (MYD with NQF or NQG)
49	0.5 L-GN/BK	822	VSS Low Signal (MYD with NQF or NQG)
50-54	--	--	Not Available
55	0.35 OG/BK	6399	Replicated TOS Signal (except NQF or NQG)
56-57	--	--	Not Available
58	0.5 YE	5361	Brake Apply Sensor Signal
59-62	--	--	Not Available
63	0.35 D-GN	890	Fuel Tank Pressure Sensor Signal

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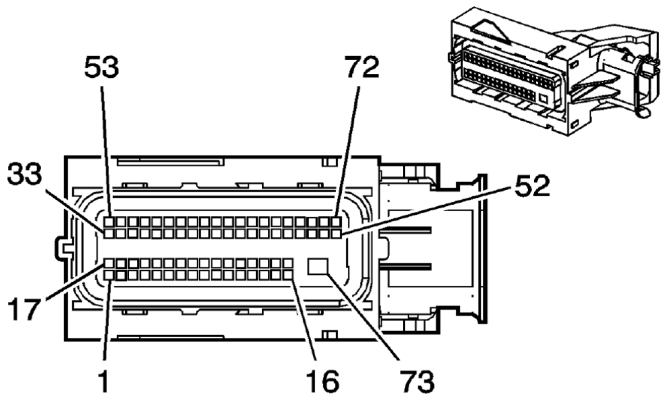
Engine Control Module (ECM) X3 (L96) (cont'd)

Pin	Wire Color	Circuit No.	Function
64	0.35 PU	1589	Fuel Level Sensor Signal - Primary
65	0.5 PU	1670	HO2S High Signal Bank 2 Sensor 2
66	0.5 TN	1671	HO2S Low Signal Bank 2 Sensor 2
67	0.5 PU/WH	1668	HO2S High Signal Bank 1 Sensor 2
68	0.5 TN/WH	1669	HO2S Low Signal Bank 1 Sensor 2
69-73	--	--	Not Available

Engine Control Module (ECM) X3 (LGH or LML)



Connector Part Information
Harness Type: Engine Chassis
OEM Connector: 12603597
Service Connector: 13574948
Description: 73-Way F MX123 34566 Series (GY)

Terminal Part Information
Pins: 2--7, 9-16, 18-21, 24-25, 27-32, 36-38, 40, 44, 46, 48-52, 54-62, 64-72
Terminated Lead: 13575575
Release Tool: J-38125-213
Diagnostic Test Probe:J-35616-64B (L-BU)
Terminal/Tray: 33467-0005/23
Core/Insulation Crimp: Pins: 2-7, 9-16, 18-21, 24-25, 27-32, 36-38, 40, 44, 46, 48, 54-55, 58-62, 64-68 - J/J
Core/Insulation Crimp: Pins: 49-52, 56-57, 69-72 - K/K

Pin 73
Terminated Lead: Pending
Release Tool: J-38125-11A
Diagnostic Test Probe: J-35616-35 (VT)
Terminal/Tray: 7116-4152-02/9
Core/Insulation Crimp: A/5

Pin	Wire Color	Circuit No.	Function
1	--	--	Not Available
2	0.5 BU/YE	6861	Water In Fuel Sensor Signal
3	0.5 L-BU/WH	1937	Secondary Fuel Level Sensor Signal (N2N)
4	0.5 TN/WH	331	Oil Pressure Sensor Signal
5	0.5 YE	5361	Brake Apply Sensor Signal
6	0.5 PU/WH	7584	Exhaust Gas Recirculation Temperature Sensor 1 Supply Voltage
7	0.5 D-BU	7583	Exhaust Gas Recirculation Temperature Sensor 2 Supply Voltage
8	--	--	Not Available
9	0.5 BN/WH	5763	Exhaust Gas Recirculation Valve Sensor Signal
10	0.5 YE	5947	Variable Nozzle Turbo Position Sensor Signal
11	0.5 YE	1578	Fuel Temperature Signal
12	0.5 BN	3681	Charge Air Cooler Outlet Temperature Sensor Signal
13	0.5 TN	3680	Charge Air Cooler Outlet Temperature Sensor Return
14	0.5 TN	2917	5 Volt Reference
15	0.5 WH	5359	Brake Apply Sensor Supply Voltage
16	0.5 GY	2704	5 Volt Reference
17	--	--	Not Available
18	0.5 D-BU	5277	Exhaust Gas Temperature Sensor 1 Signal
19	0.5 D-GN	485	Throttle Position Sensor Signal 1
20	0.5 YE	2918	Fuel Rail Pressure Sensor Signal
21	0.5 L-GN	432	Manifold Absolute Pressure Sensor Signal
22-23	--	--	Not Available

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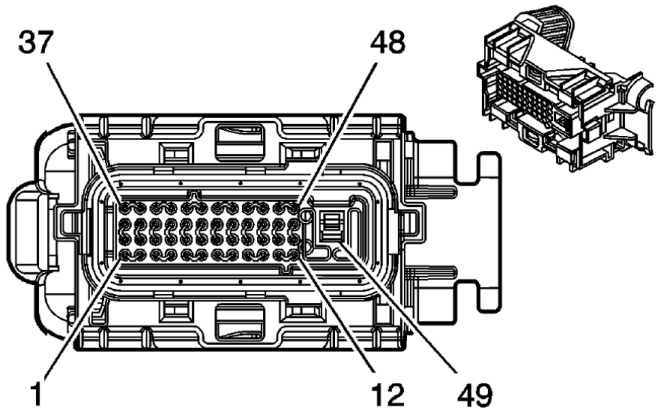
Engine Control Module (ECM) X3 (LGH or LML) (cont'd)

Pin	Wire Color	Circuit No.	Function
24	0.5 YE	410	Engine Coolant Temperature Sensor Signal
25	0.5 D-GN/WH	3654	EGR Cooler Bypass Position Sensor Signal (LML)
26	--	--	Not Available
27	0.5 BN/GY	7072	Sensor Fuel Temperature 1 Signal
28	0.5 D-GN	3683	Charge Air Cooler Inlet Temperature Sensor Signal
29	0.5 TN/BK	3682	Charge Air Cooler Inlet Temperature Sensor Return
30	0.5 GY	2705	5 Volt Reference
31	0.5 D-BU	6259	5 Volt Reference
32	0.5 GY	2701	5 Volt Reference
33-35	--	--	Not Available
36	0.5 OG/BK	2919	Low Reference
37	0.5 OG/BK	469	Low Reference
38	0.5 BN	5360	Brake Apply Sensor Low Reference
39	--	--	Not Available
40	0.5 TN	2761	Low Reference
41-43	--	--	Not Available
44	0.5 GY/BK	5765	Fuel Filter Pressure Switch Signal
45	--	--	Not Available
46	0.5 BN/WH	7073	Sensor Fuel Temperature 1 Return
47	--	--	Not Available
48	0.5 BN	6062	Low Reference
49	0.8 GY/WH	4908	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 8
50	0.8 D-BU/WH	4902	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 2

Pin	Wire Color	Circuit No.	Function
51	0.8 D-BU	4802	Direct Fuel Injector (DFI) High Voltage Control Cylinder 2
52	0.8 L-BU	4805	Direct Fuel Injector (DFI) High Voltage Control Cylinder 5
53	--	--	Not Available
54	0.5 L-GN/BK	5746	Exhaust Gas Recirculation Valve Motor Low Signal
55	0.5 OG/BK	5764	Exhaust Gas Recirculation Valve Motor High Signal
56	0.8 BN	582	Throttle Actuator Control Close
57	0.8 YE	581	Throttle Actuator Control Open
58	0.5 OG/BK	3656	EGR Cooler Bypass Motor Close Control (LML)
59	0.5 L-GN	3655	EGR Cooler Bypass Motor Open Control (LML)
60	0.5 GY/BK	6272	Low Reference
61	0.5 WH/BK	6271	CKP Sensor Signal
62	0.5 D-GN	485	Throttle Position Sensor Signal 1
63	--	--	Not Available
64	0.5 D-GN/WH	6142	Power Take Off Engine Shutdown Signal (PTO)
65	0.5 D-BU/WH	6265	CMP Sensor Signal
66	0.5 BN	6266	Low Reference
67	0.5 BN	6274	Low Reference
68	0.5 WH	6275	Low Reference
69	0.8 D-GN/WH	4903	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 3
70	0.8 L-GN/WH	4905	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 5
71	0.8 D-GN	4803	Direct Fuel Injector (DFI) High Voltage Control Cylinder 3
72	0.8 GY	4808	Direct Fuel Injector (DFI) High Voltage Control Cylinder 8
73	3 BK/WH	451	Ground

Transmission Control Module (TCM) (M30)



Connector Part Information
Harness: Engine
OEM: 15463921
Service: 88987979
Description: 49-Way F GT 280 Micro-Pack 64 Series Sealed (BK)

Terminal Part Information
Pins: 1, 2, 6, 7, 16, 17, 20, 25, 31, 32, 35, 37, 38, 40, 41
Terminated Lead: 13575528
Release Tool: J-38125-21
Diagnostic Test Probe: J-35616-64B (L-BU)
Terminal/Tray: 15359541/4
Core/Insulation Crimp: M/M

Pins: 3, 5, 11, 23, 29, 30, 39, 45, 46
Terminated Lead: 13579968
Release Tool: J-38125-21
Diagnostic Test Probe: J-35616-64B (L-BU)
Terminal/Tray: 15359541/4
Core/Insulation Crimp: M/M

Pin: 49
Terminated Lead: Pending
Release Tool: J-38125-553
Diagnostic Test Probe: J-35616-4A (PU)
Terminal/Tray: 15491972/24
Core/Insulation Crimp: E/5

Pin	Wire Color	Circuit No.	Function
1	0.5 BN	418	TCC PWM Solenoid Valve Control
2	0.5 L-GN	1222	Shift Solenoid 1 Valve Control
3	0.35 OG	1983	Transmission Turbine Speed Signal
4	--	--	Not Used
5	0.5 OG/BK	6399	Replicated TOS Signal
6	0.5 TN	2501	High Speed GMLAN Serial Data Bus (-)
7	0.5 TN/BK	2500	High Speed GMLAN Serial Data Bus (+)
8-10	--	--	Not Used
11	0.35 D-BU	5985	Accessory Wakeup serial Data
12-14	--	--	Not Used
15	--	--	Not Used
16	0.5 L-GN/BK	822	VSS Low Signal
17	0.5 L-BU/WH	1229	PC Solenoid Valve Low Control (Solenoid A)
18-19	--	--	Not Used
20	0.5 YE	1223	Shift Solenoid 2 Valve Control
21-22	--	--	Not Used
23	0.35 GY	773	Transmission Range Switch Signal A
24	--	--	Not Used
25	0.5 TN/BK	422	TCC Solenoid Valve Control
26-28	--	--	Not Used
29	0.35 TN/WH	771	Transmission Range Switch Signal A
30	0.35 TN	2762	Low Reference
31	0.5 PK/WH	2139	Ignition 1 Voltage
32	0.5 RD/WH	1840	Battery Positive Voltage

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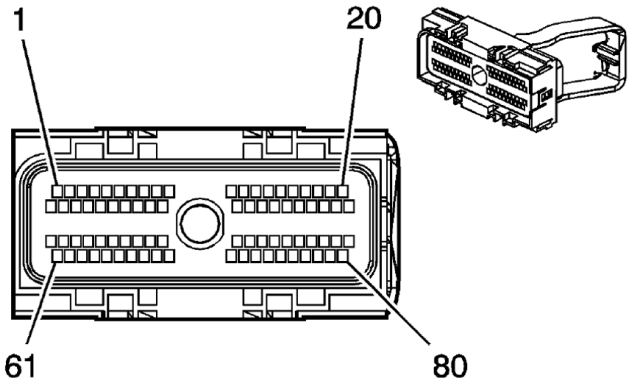
Transmission Control Module (TCM) (M30) (cont'd)

Pin	Wire Color	Circuit No.	Function
33-34	--	--	Not Used
35	0.35 YE/BK	1227	TFT Sensor Signal
36	--	--	Not Used
37	0.5 TN	2501	High Speed GMLAN Serial Data Bus (-)
38	0.5 TN/BK	2500	High Speed GMLAN Serial Data Bus (-)
39	0.35 WH	776	Transmission Range Switch Signal P
40	0.5 OG/BK	1228	PC Solenoid Valve High Control
41	0.5 PU/WH	821	VSS High Signal
42-44	--	--	Not Used
45	0.35 L-BU	1984	Transmission Turbine Speed Switch Low Reference
46	0.35 YE	772	Transmission Range Switch Signal B
47-48	--	--	Not Used
49	0.8 BK/WH	451	Ground

Transmission Control Module (TCM) (MW7)



Connector Part Information
Harness Type: Engine Chassis
OEM Connector: 15499493
Service Connector: 88988938
Description: 80-Way F (BK)

Terminal Part Information
Terminated Lead: 13575808
Release Tool: J-38125-217
Diagnostic Test Probe: J-35616-14 (GN)
Terminal/Tray: 33012-3002/26
Core/Insulation Crimp: Pins: 2, 6, 10-11, 14, 17, 20, 25, 27, 33-34, 36, 40, 43, 47, 51-55, 57-58, 60, 63, 66, 70-71, 73-74, 77-80 - E/2
Core/Insulation Crimp: Pins: 9, 69 - A/E/A/C

Pin	Wire Color	Circuit No.	Function
1	--	--	Not Used
2	0.5 PK/WH	2139	Ignition 1 Voltage
3-5	--	--	Not Used
6	0.5 TN/BK	2500	High Speed GMLAN Serial Data Bus (+)
7-8	--	--	Not Used
9	0.8 BK/WH	451	Ground
10	0.5 RD/WH	1840	Battery Positive Voltage
11	0.5 OG/BK	1228	PC Solenoid Valve High Control
12-13	--	--	Not Used
14	0.5 GY	773	Transmission Range Switch Signal C
15-16	--	--	Not Used
17	0.5 PK	1224	Transmission Fluid Pressure Switch Signal A
18-19	--	--	Not Used
20	0.5 L-BU	1984	Transmission Turbine Speed Switch Low Reference
21-24	--	--	Not Used
25	0.5 OG/BK	6399	Replicated TOS Signal
26	--	--	Not Used
27	0.5 TN	2501	High Speed GMLAN Serial Data Bus (-)
28-32	--	--	Not Used
33	0.5 YE/RD	1223	Shift Solenoid 2 Valve Control
34	0.5 WH	776	Transmission Range Switch Signal P
35	--	--	Not Used
36	0.5 BN/WH	2469	PC Solenoid Valve Low Control
37-39	--	--	Not Used
40	0.5 L-GN/BK	822	VSS Low Signal
41-42	--	--	Not Used
43	0.5 D-BU	5985	Accessory Wakeup Serial Data
44-46	--	--	Not Used
47	0.5 TN	2501	High Speed GMLAN Serial Data Bus (-)
48-50	--	--	Not Used
51	0.5 OG/WH	2527	Shift Solenoid C Valve Control

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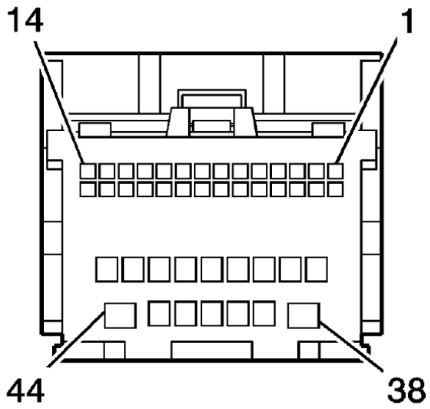
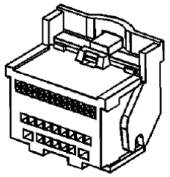
Transmission Control Module (TCM) (MW7) (cont'd)

Pin	Wire Color	Circuit No.	Function
52	0.5 L-GN	1222	Shift Solenoid 1 Valve Control
53	0.5 YE	772	Transmission Range Switch Signal B
54	0.5 YE/BK	1227	TFT Sensor Signal
55	0.5 L-BU/WH	1229	PC Solenoid Valve Low Control
56	--	--	Not Used
57	0.5 OG	1226	Transmission Fluid Pressure Switch Signal C
58	0.5 TN	2762	Low Reference
59	--	--	Not Used
60	0.5 PU/WH	821	VSS High Signal
61-62	--	--	Not Used
63	0.5 PK/WH	2139	Ignition 1 Voltage
64-65	--	--	Not Used
66	0.5 TN/BK	2500	High Speed GMLAN Serial Data Bus (+)

Pin	Wire Color	Circuit No.	Function
67-68	--	--	Not Used
69	0.8 BK/WH	451	Ground
70	0.5 RD/WH	1840	Battery Positive Voltage
71	0.5 BN	323	Actuator Supply Voltage
72	--	--	Not Used
73	0.5 TN/WH	771	Transmission Range Switch Signal A
74	0.5 D-BU/WH	1530	Transmission Mainline Pressure Solenoid Control
75-76	--	--	Not Used
77	0.5 L-GN/BK	2529	Fluid Pressure Switch Signal 4
78	0.5 BN	418	TCC PWM Solenoid Valve Control
79	0.5 D-BU	1225	Transmission Fluid Pressure Switch Signal B
80	0.5 OG	1983	Transmission Turbine Speed Switch Signal

Radio X1 (UYS)





Connector Part Information
Harness Type: Instrument Panel (Y91)
Harness Type: Instrument Panel Extension (without Y91)
OEM Connector: 13589609
Service Connector: 88988902
Description: 44-Way F GT 150/280 64 Series (BK)

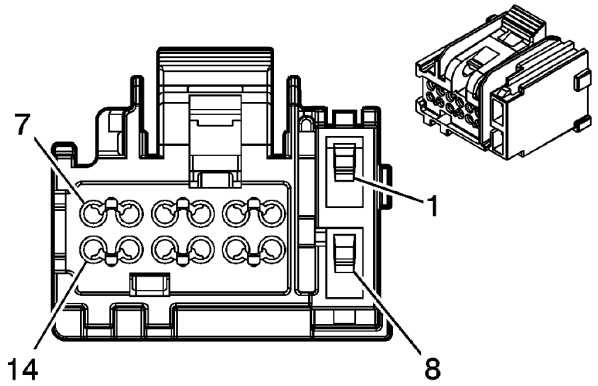
Terminal Part Information
Pins: 6, 20, 28
Terminated Lead: 13327119
Release Tool: J-38125-215A
Diagnostic Test Probe: J-35616-64B (L-BU)
Terminal/Tray: SAIT-A03T-M064/14
Core/Insulation Crimp: P/P

Pins: 29, 31-34, 39-43
Terminated Lead: 13327109
Release Tool: J-38125-553
Diagnostic Test Probe: J-35616-2A (GY)
Terminal/Tray: 12191812/19
Core/Insulation Crimp: E/C

Pins: 38, 44
Terminated Lead: 13327130
Release Tool: J-38125-553
Diagnostic Test Probe: J-35616-4A (PU)
Terminal/Tray: 15304711/8
Core/Insulation Crimp: 2/A

Pin	Wire Color	Circuit No.	Function
1-5	--	--	Not Used
6	0.35 L-BU/BK	659	Low Reference (UE1)
7-19	--	--	Not Used
20	0.35 D-BU	658	Cellular Telephone Voice Signal (UE1)
21-27	--	--	Not Used
28	0.35 D-GN	5060	Low Speed GMLAN Serial Data
29	0.5 BARE	2011	Drain Wire (without Y91)
	0.35 BARE	2011	Drain Wire (Y91)
30	0.5 BARE	2099	Left Rear Audio Drain Wire (without Y91)
31	0.35 OG/BK	1546	Front Low Level Audio Signal (-)
32	0.35 D-GN	1947	Left Front Low Level Audio Signal (-)
33	0.35 TN	1946	Right Rear Low Level Audio Signal (-)
34	0.35 BN	1999	Left Rear Low Level Audio Signal (-)
35-36	--	--	Not Used
37	0.35 OG	6978	Amplifier Control (without Y91)
38	1 BK	2550	Ground
39	0.35 L-GN/WH	512	Right Front Low Level Audio Signal (+)
40	0.35 TN	511	Left Front Low Level Audio Signal (+)
41	0.35 D-BU	546	Right Rear Low Level Audio Signal (+)
42	0.35 BN/WH	599	Left Rear Low Level Audio Signal (+)
43	0.35 WH	7066	Entertainment Remote Enable Signal
44	1 RD/WH	340	Battery Positive Voltage

Radio X1 (without UYS or UL5)



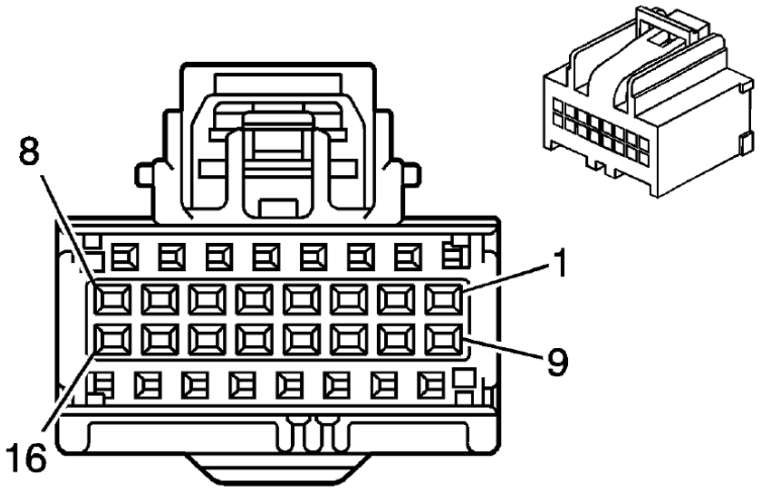
Connector Part Information
Harness: Instrument Panel (Y91)
Harness: I/P Extension (except Y91)
OEM: 13601512
Service: 89047362
Description: 14-Way F 0.64/1.5 Series (BK)

Terminal Part Information
Pins: 1, 8
Terminated Lead: 13575735
Release Tool: J-38125-553
Diagnostic Test Probe: J-35616-2A (GY)
Terminal/Tray: 12191812/19
Core/Insulation Crimp: C/A

Pins: 2-7, 9-11, 13
Terminated Lead: 13575867
Release Tool: J-38125-215A
Diagnostic Test Probe: J-35616-64B (L-BU)
Terminal/Tray: SAIT-A03T-M064/14
Core/Insulation Crimp: P/P

Pin	Wire Color	Circuit No.	Function
1	1 RD/WH	340	Battery Positive Voltage
2	0.35 TN	511	Left Front Low Level Audio Signal (+) (UQA)
	0.5 TN	201	Left Front Speaker Output (+) (UQ3 or UQ5)
3	0.35 L-GN/ WH	512	Right Front Low Level Audio Signal (+) (UQA)
	0.5 L-GN	200	Right Front Speaker Output (+) (UQ3 or UQ5)
4	0.35 PK	5149	Voice Recognition Audio Signal (UUL or UUK with UE1)
	0.35 GY	655	Cellular Telephone Voice Signal (UUL or UUK without UE1)
5	0.35 PK/BK	5152	Low Reference (UUL or UUK with UE1)
	0.5 BARE	514	Drain Wire (UUL or UUK without UE1 and without Y91)
	0.35 BARE	514	Drain Wire (UUL or UUK without UE1 and with Y91)
6	0.35 WH	7066	Entertainment Remote Enable Signal (U42)
7	0.35 YE	6817	LED Backlight Dimming Control
8	1 BK	2550	Ground
9	0.35 D-GN	1947	Left Front Low Level Audio Signal (-) (UQA)
	0.5 GY	118	Left Front Speaker Output (-) (UQ3 or UQ5)
10	0.35 OG/BK	1546	Right Front Low Level Audio Signal (-) (UQA)
	0.5 D-GN	117	Right Front Speaker Output (-) (UQ3 or UQ5)
11	0.5 BARE	2011	Drain Wire (UQA without Y91)
	0.35 BARE	2011	Drain Wire (UQA with Y91)
12	--	--	Not Used
13	0.35 D-GN	5060	Low Speed GMLAN Serial Data
14	--	--	Not Used

Radio X2 (without UYS or UL5)

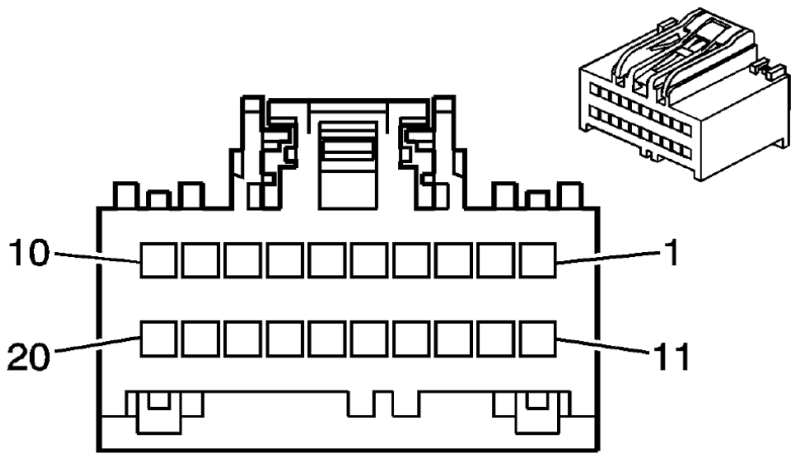


Connector Part Information
Harness Type: Instrument Panel (Y91)
Harness Type: I/P Extension (except Y91)
OEM Connector: 15491285 (Y91)
OEM Connector: 13676739 (except Y91)
Service Connector: 15136073
Description: 16-Way F Kaizen 64 Series (YE)

Terminal Part Information
Terminated Lead: 13575867
Release Tool: J-38125-215A
Diagnostic Test Probe: J-35616-64B (L-BU)
Terminal/Tray: SAIT-A03T-M064/14
Core/Insulation Crimp: P/P

Pin	Wire Color	Circuit No.	Function
1	0.35 BN/WH	367	Left Audio Signal (+) (U2K)
2	0.35 D-GN/WH	368	Right Audio Signal (+) (U2K)
3	0.5 BARE	2099	Drain Wire (UQA except Y91)
4	--	--	Not Used
5	0.5 BN	199	Left Rear Speaker Output (+) (UQ3 or UQ5)
	0.35 BN/WH	599	Left Rear Low Level Audio Signal (+) (UQA)
6	0.35 D-BU	546	Right Rear Low Level Audio Signal (+) (UQA)
	0.5 D-BU	46	Right Rear Speaker Output (+) (UQ3 or UQ5)
7	0.35 D-BU	658	Cellular Telephone Voice Signal (UE1)
8	0.35 OG	6978	Amplifier Control (UQA except Y91)
9	0.35 TN/WH	372	Left Radio Audio Output (-) (U2K)
10	0.35 GY	388	Remote Radio Right Audio Signal (U2K)
11	0.35 BARE	1573	Drain Wire (U2K)
12	--	--	Not Used
13	0.35 YE	116	Left Rear Low Level Audio Signal (-) (UQ3 or UQ5)
	0.35 BN	1999	Left Rear Low Level Audio Signal (-) (UQA)
14	0.5 L-BU	115	Right Rear Low Level Audio Signal (-) (UQ3 or UQ5)
	0.35 TN	1946	Right Rear Low Level Audio Signal (-) (UQA)
15	0.35 L-BU/BK	659	Low Reference (UE1)
16	--	--	Not Used

Radio X3 (U42)

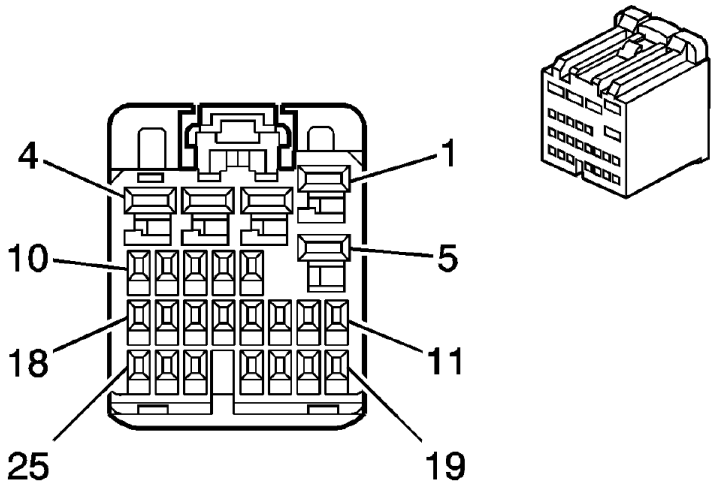


Connector Part Information
Harness Type: Instrument Panel (Y91)
Harness Type: Instrument Panel Extension (without Y91)
OEM Connector: 15489824
Service Connector: 15126711
Description: 20-Way F 64 Series (BK)

Terminal Part Information
Pins: 1-7, 9 (Y91), 10, 11, 12 (Y91), 13, 14 (Y91), 16, 17 (Y91), 20
Terminated Lead: 13327119
Pins:9 (without Y91), 12 (without Y91), 14 (without Y91), 17 (without Y91)
Terminated Lead: 13575867
Release Tool: J-38125-215A
Diagnostic Test Probe: J-35616-64B (L-BU)
Terminal/Tray: SAIT-A03T-M064/14
Core/Insulation Crimp: P/P

Pin	Wire Color	Circuit No.	Function
1	0.35 L-BU	5826	Left DVD Audio Signal (+)
2	0.35 PU	6979	DVD Audio Common
3	0.35 YE	2059	Left Auxiliary Audio Signal (+)
4	0.35 PK/BK	5844	Video Bright Control
5	0.35 L-GN/BK	5845	Video Module Signal
6	0.35 OG/BK	5831	Remote Infra Red Signal (+)
7	0.35 PU	2056	Auxiliary Video High Signal
8	--	--	Not Used
9	0.35 BARE	6976	DVD Video Drain Wire (Y91)
	0.5 BARE	6976	DVD Video Drain Wire (without Y91)
10	0.35 D-GN	6975	DVD Video Signal (+)
11	0.35 WH	5828	Right DVD Audio Signal (+)
12	0.35 L-BU	6980	DVD Audio Shield (Y91)
	0.35 L-BU	6980	DVD Audio Shield (without Y91)
13	0.35 WH	2058	Right Auxiliary Audio Signal (+)
14	0.35 BARE	5345	Auxiliary Audio Drain Wire (Y91)
	0.5 BARE	5345	Auxiliary Audio Drain Wire (without Y91)
15	--	--	Not Used
16	0.35 TN	5830	Remote Infra Red Signal (-)
17	0.35 BARE	5346	Video Drain Wire (Y91)
	0.35 BARE	5346	Video Drain Wire (without Y91)
18-19	--	--	Not Used
20	0.5 D-GN/WH	5335	DVD Video Signal (-)

Radio X4 (UYS)

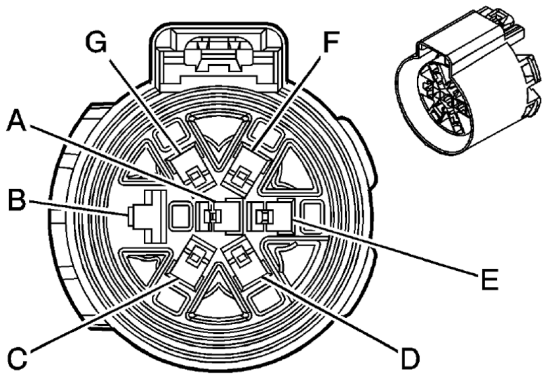


Connector Part Information
Harness Type: Instrument Panel ((Y91)
Harness Type: Instrument Panel Extension (without Y91)
OEM Connector: 15491304
Service Connector: 15126710
Description: 20-Way F USCAR 64 Series (GY)

Terminal Part Information
Terminated Lead: Pins 5-7, 15-18 - 13327119
Terminated Lead: Pins 20 - 13575867
Release Tool: J-38125-215A
Diagnostic Test Probe: J-35616-64B (L-BU)
Terminal/Tray: SAIT-A03T-M064/14
Core/Insulation Crimp: P/P

Pin	Wire Color	Circuit No.	Function
1-4	--	--	Not Used
5	0.35 WH	7641	Camera Signal (+)
6	0.35 GY	655	Low Reference (Without UE1)
	0.35 PK	5149	Voice Recognition Audio Signal (UE1)
7	0.35 PU	5837	Amplifier Audio Prompt Signal (+) (Y91)
8-14	--	--	Not Used
15	0.35 L-BU	7642	Camera Signal (-)
16	0.35 BARE	514	Low Reference (Without UE1)
	0.35 PK/BK	5152	Low Reference (UE1)
17	0.35 GY	5836	Amplifier Audio Prompt Signal (-) (Y91)
18	0.35 BARE	5838	Drain Wire (Y91)
19	--	--	Not Used
20	0.5 D-GN/WH	817	Vehicle Speed Signal

Trailer Connector (except MEX or EXP)



Connector Part Information
Harness Type: Camper
OEM Connector: 13626146
Service Connector:15306164
Description: 7-Way F Metri-Pack 280/630 Series Sealed (D-GY)

Terminal Part Information
Pins: A, D, F, G
Terminated Lead: Pending
Release Tool: J-38125-553
Diagnostic Test Probe: J-35616-4A (PU)
Terminal/Tray: 12110847/4
Core/Insulation Crimp: C/5

Pins: B
Terminated Lead: Pending
Release Tool: J-38125-11A
Diagnostic Test Probe: J-35616-42 (RD)
Terminal/Tray: 15305232/23
Core/Insulation Crimp: B/3

Pins: C, E
Terminated Lead: Pending
Release Tool: J-38125-553
Diagnostic Test Probe: J-35616-4A (PU)
Terminal/Tray: 12110845/4
Core/Insulation Crimp: F/5

Pin	Wire Color	Circuit No.	Function
A	1 L-GN	1624	Trailer Backup Lamps Supply Voltage
B	5 WH	22	Ground
C	3 D-BU	47	Solid State Relay Feedback
D	0.8 D-GN	1619	Trailer Right Rear Turn/Stop Lamp Supply Voltage
E	3 RD/BK	742	Battery Positive Voltage
F	1 BN	2109	Trailer Park Lamps Supply Voltage
G	0.8 YE	1618	Trailer Left Rear Turn/Stop Lamp Supply Voltage